An investigation of client loyalty in the construction professional services sector

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A thesis submitted in partial fulfilment of the requirements of the University of Wolverhampton for the degree of Doctor of Philosophy

25th February 2021

This work or any part thereof has not previously been presented in any form to the university or to any other body whether for the purposes of assessment, publication or for any other purpose (unless otherwise indicated). Save for any express acknowledgments, references and/or bibliographies cited in the work, I confirm that the intellectual content of the work is the result of my own efforts and of no other person.

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Date: 25th February 2021.

Abstract

Construction professional services (CPS) suppliers perform several vital roles in the construction industry. Arguably, their success (and, in hard times, their survival) is determined by the loyalty of their clients. Loyal clients provide a reliable stream of revenue and help generate new business for CPS suppliers by providing recommendations and referrals. However, prior to this research, there were no known empirical studies which investigated CPS client loyalty.

Using evidence obtained from a literature review, a conceptual model was developed that identified the key-candidate service-related antecedents of client loyalty. A phase of qualitative research was carried out using purposeful and snowball sampling. Semi-structured interviews were arranged with 20 respondents, with these being a mix of CPS clients and suppliers. The resulting data were subject to thematic analysis, and the conceptual model of CPS-client loyalty was refined based on the findings.

A phase of quantitative research was carried out to test the degree to which the qualitative research findings could be generalised to the wider CPS-client population. This involved a survey, and analysis of the data using factor analysis and hypothesis testing using multiple regression. This was itself followed up using a phase of member checking with a group of experts to validate and help explain some discrepant findings.

This research has made several contributions to knowledge. It provides empirical support for the existence of a multidimensional form of commitment in a CPS supplier-client context. It is the first known research to identify what CPS suppliers should focus on to be able to build and benefit from client loyalty. The results showed that service quality was the antecedent most strongly associated with loyalty. Affective commitment was found to be next in importance. A weak-but-

significant relationship with locked-in commitment was also identified. It should be noted that sampling during both qualitative and quantitative phase of research was restricted to respondents from the UK Midlands. Therefore, there are limits to which the findings can be generalised beyond this geographical region.

In summary, CPS suppliers are advised to focus first and foremost on fulfilling their clients' rational desire for a high level of service quality. However, to achieve optimum levels of client loyalty, they should be mindful of the power of personal relationships between their employees and their clients. In this respect, they are advised to avoid rotating their account representatives where healthy relations and rapport are evident.

Acknowledgments

I am very grateful to Dr Paul Hampton for his encouragement in embarking upon this research and subsequent support throughout my research journey.

I am also very grateful to Dr Nii Ankrah and Dr Ezekiel Chinyio for their valuable advice and support during my research.

Thanks to Dr Paul Wilson for his suggestions regarding the statistical analysis undertaken during this research.

Thanks to the people who responded to my questionnaire and to those who allowed me to interview them as part of completing this research. I received many kind words which strengthened my belief that I was finding out about something that matters to a lot of people.

Thanks to Wayne Williams for taking me on all those years ago and encouraging me to keep on learning through it all.

Thanks to Mom, Dad, Ben, Becky and the girls.

Dedication

For Jane and Fern.

List of abbreviations and key terms

AGFI	Adjusted goodness-of-fit index.
AL	Attitudinal loyalty.
B2B	Business-to-business.
BES	Built environment sector.
CAD	Computer-aided design.
CFA	Confirmatory factor analysis.
CIOB	Chartered Institute of Building.
CPS	Construction professional services: *The Construction Industry Council define CPS by their sub-professions, specifically "architects, quantity surveyors, surveyors (other), building services engineers, civil and structural engineers, planners (town planners), project managers and multidisciplinary practices"* (CIC, 2008, p.3).
EFA	Exploratory factor analysis.
GDP	Gross Domestic Product.
GDPR	General Data Protection Regulation.
GFI	Goodness-of-fit index.
ICO	Information Commissioner's Office.
IOSE	Institution of Structural Engineers.
KCE	Key contact employee.
KMO	Kaiser–Meyer–Olkin (measure).
Loyalty	A favourable attitude that results in intentions to repurchase and recommend a supplier.
MCAR	Missing completely at random.
ML	Maximum likelihood.
MSc	Master of Science.
PBS	Professional and business services.

PCA	Principal components analysis.
P-P	Probability–probability.
PSF	Professional service firm: An initialism common within the academic literature. CPS suppliers are a sub-group within PSFs.
PWOM	Positive word of mouth: Defined as a client's intention to offer referrals and recommend a CPS supplier.
QUAL	Abbreviation denoting a qualitative research method.
QUANT	Abbreviation denoting a quantitative research method.
Rational	To do with reason and logic. In the context of this thesis, rational motivation is associated with a client fulfilling their employing organisation's objectives.
Relational	To do with how people feel and behave towards each other.
RIBA	Royal Institute of British Architects.
RICS	Royal Institution of Chartered Surveyors.
RP	Repatronage: Defined as a client's intention to continue using the services of a CPS supplier. Please note, it is only the variable for this term that is thus abbreviated.
SEM	Structural equation modelling.
SET	Social exchange theory.
SPSS	Statistical Package for Social Sciences.
TCE	Transaction cost economics.
TA	Thematic analysis.
VIF	Variance inflation factor.
WOM	Word of mouth.

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Chapter 1. Introduction

1.1. General introduction

This chapter introduces the context of the study and presents an argument as to why this research was needed. The research questions, aims and objectives are stated to provide a reference point against which the outcomes can be assessed. A brief explanation of the scope of the research, the methodology and its benefits are presented. The chapter then concludes with a brief outline of the thesis structure.

1.2. Background to construction professional services

The construction industry is of great importance to the UK economy, given its contribution to wider economic output, employment, and the creation of infrastructure necessary for growth. In the UK, the sector employs 2.4 million people and contributes £117 billion or 6% of gross domestic product (GDP) (Rhodes, 2019). Construction professional service (CPS) suppliers contribute more than £25 billion towards this (CIOB, 2020). Architectural services alone generate ~£4.8 billion per year (RIBA, 2017a).

Despite the vulnerability of construction-related service markets during periods of economic downturn, there are apparent opportunities for CPS suppliers. The UK government has pledged a multi-billion-pound package of investment to help regenerate the nations aging infrastructure and to drive decarbonisation (HM Treasury, 2020). CPS suppliers are better geared towards international market penetration than many other construction service suppliers. Integrated construction firms often use their CPS capabilities as a means of market differentiation when competing internationally (Lu *et al.,* 2013). The impact of differing national regulations, such as control of land use, building regulations,

fee renumeration and environmental legislation, generally have a less onerous impact on CPS suppliers compared to other construction service suppliers seeking footholds in new markets.

Despite the vulnerability of construction-related service markets during periods of economic downturn, there are opportunities for CPS suppliers in both domestic and emerging economies. In the UK, a growing population is causing strain on its aging infrastructure and buildings, requiring their regeneration and renewal. The UK construction industry is also at the forefront of technological advances such as building information modelling, both within the UK and internationally (Piroozfar *et al.,* 2019). Opportunities abound for those construction professionals who are prepared to embrace the use of new technologies such as artificial intelligence (RICS, 2017a).

1.3. The importance of client loyalty

Operating in the CPS sector has challenges. Construction industry outputs fluctuate with economic and political cycles, experiencing greater amplitudes (booms and busts) than many other industries (Greenhalgh and Squires, 2011). During the 2008–2009 economic recession, 54% of CPS firms experienced a decrease in fee income. Additionally, 46% of firms made staff redundant (CIC, 2010). Of all industries, construction has the highest number of firm insolvencies (Office for National Statistics, 2018a).

The recent COVID-19 pandemic has resulted in even greater challenges for the construction industry. In a recent survey, 80% of responding UK construction professionals reported experiencing a decreased workload. Furthermore, 67% stated that they had seen a decrease in new business enquiries. Only 1% of the respondents surveyed reported no adverse impact resulting from COVID-19 (RICS, 2020).

The markets for CPS firms and professional service firms (PSFs) in general are increasingly competitive. Clients are applying greater scrutiny to the purchase of professional services due to the high adverse consequences of receiving poor service and advice. There is a greater demand placed on professionals to market themselves more effectively due to the supply of services outstripping demand (Harvey and Mitchell, 2015). During construction industry downturn periods, CPS markets can be so competitive that suppliers are forced to accept unsustainably low fees (Bucknall, 2014).

Few CPS suppliers can take advantage of some of the biggest fee-earning opportunities. For example, ~90% of UK architectural practices were excluded from bidding for public sector contracts due to not meeting the minimum turnover requirements (Howerth, 2012). In response to such concerns, the government set a target that 33% of public sector procurement spend is to be awarded to small businesses by 2022 (Cabinet Office, 2018). Other measures have been taken, such as encouraging public authorities to break down contract awards into several smaller lots to encourage participation. Despite such measures, a few CPS suppliers dominate the sector (Building, 2017).

The problems of fluctuating revenues and market competitiveness are exacerbated for CPS suppliers, because they have a tendency to consider time spent on finding new business as either unimportant (Jaafar *et al*., 2008) or merely "*a necessary evil*" (Sawczuk, 2010, p. xxvii). Professionals tend not to be sales and marketing orientated (Ojo, 2011; Halinen and Jaakkola, 2012). Furthermore, they often face constant demands and short deadlines, and generally view marketing activities as wasting time when they could be carrying out billable work. Amonini *et al.* (2010, p. 30) described what they considered to be "*a disdain for commercialism*" amongst professionals. Therefore, CPS firms tend to rely on the

professional networks of their partners or senior managers for generating business (Jaafar, Aziz and Wai, 2008).

Construction professions operate within a framework of professional and ethical obligations that constrain the more ruthless aspects of selling and opportunism (Simon, 2005). Practising ethically can therefore come at a commercial cost. CPS suppliers are expected to act with impartiality, even in situations where this could be detrimental to a client relationship. Furthermore, professionals are required to adhere to technical codes and have only a limited ability to differentiate the core of their service offerings (Sweeney, Soutar and McColl-Kennedy, 2011).

Achieving repeat business is vitally important to the success of CPS suppliers (Berg *et al.,* 2019). However, they often experience difficulties in sustaining long-term relationships, due to the transactional (and often adversarial) nature of the construction industry (Challender, Farrell and McDermott, 2019). Such difficulties faced by CPS firms are compounded by the nature of construction projects. At a fundamental level, a project may be conceptualised as a temporary organisation of resources aimed at achieving specific goals (Chih, Zwikael and Restubog, 2019). Each project is unique, with its own complexities and the potential for miscommunication and disputes. Furthermore, projects inevitably come to an end, often leading to the cessation of relationships between those involved. Therefore, the one-off nature of projects can make it more difficult for professionals to establish business continuity with their clients (Gadde and Dubois, 2010; Jiang, Henneberg and Naude, 2011). This presents a problem for CPS suppliers as their success (and indeed their survival) depends heavily on the development and maintenance of long-term relationships with key clients (Connaughton and Meikle, 2013). The project-based nature of many professional services is an incentive to foster lasting client relationships to encourage recommissions and

recommendations to other prospective clients once commissions end (Casidy and Nyadzayo, 2017; Heirati *et al.*, 2018).

Marketing is an expensive and potentially distracting activity for CPS suppliers. The construction industry is like most others in that the cheapest sales are usually achieved by repeat business (Egemen and Mohamed, 2006). The time and costs associated with bidding for new work represents a significant overhead. Retaining clients can lead to maintaining or even increasing sales and customer share, and to lower costs (Palmatier, Scheer and Steenkamp, 2007). It has been argued that a supplier's existing relationships with its clients are fundamental assets that determine its future more than anything else (Gordon, 2000; Cater and Cater, 2009). Developing stronger and longer-lasting relationships leads to lower risks and transaction costs, benefiting construction service providers and their clients alike (Black, Akintoye and Fitzgerald, 2000). A sample of CPS suppliers' financial data shows that an average of 70% of revenues originate from only 30% of CPS firms' clients (Jewell, Flanagan and Lu, 2014).

To achieve success in business-to-business (B2B) markets, suppliers must nurture relationships with clients, encouraging their future purchases and level of advocacy (Rauyruen and Miller, 2007). Across service industries, profitability climbs steeply when firms lower their client-defection rate. Focusing on retaining clients is an even more profitable strategy than gaining market share or cost-cutting (Zeithaml, Berry and Parasuraman, 1996; Narayandas, 2005). Evidence from over 100 firms in 24 industries demonstrates that a 25–85% increase in profitability could be achieved by a mere 5% reduction in customer defection (Oliver, 1999). It has been demonstrated that, by increasing client retention rates by 5%, PSFs achieved a 25–75% growth in profitability (Chan *et al.*, 2001, p. 5). Reichheld (1996) argued that loyal clients are less sensitive to price, pass on positive recommendations to other potential customers and add value in the longer

term. Capturing new customers to replace those lost is expensive. Furthermore, for CPS firms, business continuity is a prerequisite for growth (Jewell, Flanagan and Lu, 2014).

In the context of CPS, Heightchew (1999, p. 36) stressed the advantages of retaining existing accounts, arguing that "*winning projects from new clients is orders of magnitude harder than securing follow-on work or a next assignment from your loyal cadre of existing clients."* Retaining profitable client accounts should be a key strategic goal for firms (Berry and Parasuraman, 2004), particularly for professional practices, many of which have low levels of marketing expertise and expenditure. The argument for focusing on existing clients is even more compelling when considered in context, with CPS suppliers operating in business-to-business markets. They tend to have a smaller number of clients, with each making a larger contribution relative to turnover.

Long-term supply collaborative relationships can also be advantageous for the construction industry and clients. This was identified decades ago in the Egan report (Egan, 1998). However, lessons appear to not have been learnt. Moves towards partnering relationships were eroded in the face of shocks to the industry during the economic downturn beginning in 2008. This led to a return to focusing on short-term relationships based on winning-price bids (DBIS, 2013). More recently, the Farmer Review identified the unresolved need for the construction industry to improve the "general poor relations it has with its own clients" (Farmer, 2016. p.40). Evidence from the Grenfell Tower Enquiry has demonstrated how poor levels of collaboration and communication between clients and their supply chains can contribute to poor quality construction work and even lead to fatalities (Grenfell Tower Enquiry, 2021).

Recent geo-political turbulence around Brexit led to a downturn in investment intentions, according to market surveys (RICS, 2019a). System shocks due to the COVID-19 pandemic also had negative effects on the construction industry during 2020. However, more promisingly for CPS suppliers and the wider construction industry, aggregate workloads are expected to increase over the course of 2021 (RICS, 2021).

One important expression of loyalty is a client's advocacy. This is manifested by way of referrals and recommendations, often referred to as positive word of mouth (PWOM). In wider business markets, PWOM has been shown to triple the effectiveness of traditional advertising (Hogan, Lemon and Libai, 2004). Referrals and recommendations are important sources of new business for firms operating in business-to-business markets (File, Cermak and Prince, 1994; Kim, 2014). Reichheld (2003, p. 46) argued that the Net Promoter Score (based on client advocacy) is the single strongest indicator of a firm's future success. Hoxley (1995) has found that more than half of building surveying firms' instructions from new clients originate from referrals or recommendations.

In the professional service sector, client advocacy is a particularly important source of new business (Cater and Cater, 2010; Heirati *et al.,* 2018). Due to the relatively high degree of service intangibility, many prospective clients find it difficult to self-evaluate the offerings of PSFs (Parasuraman, Zeithaml and Berry, 1985). Referrals from peers within business networks have high credence value as people are unlikely to risk their own reputation by recommending an unworthy service provider (Palmatier *et al*., 2006). Furthermore, given the significant impact that a delivered CPS can have on a project, independent referrals reduce the client's perceived risk associated with selecting a supplier. When receiving recommendations about a service provider, a client will evaluate the information based on the source's credibility, independence and perceived consistency with

their own values and needs (Kim, 2014). Advocacy from a trusted colleague or independent source has a much more persuasive impact than a firm's own promotion activities (Williams and Buttle, 2011). For these reasons, PWOM is particularly compelling for the prospective new clients of CPS suppliers.

Another less obvious benefit of client loyalty for CPS firms is talent retention. Typically, construction professionals are highly skilled and educated individuals. The costs that firms must incur to either train or attract them from competitors are often high. This problem is exacerbated by the fact that such individuals are often highly marketable and in demand. As well as bearing the risk of losing valuable employees to competitors, CPS have a low degree of capital intensity. This means that the barriers preventing individuals from setting up their own competing practices are low. Furthermore, professionals often expect much from their employers with respect to autonomy and renumeration (Bullinger and Treisch, 2015). The problems associated with attracting, managing and retaining professionals is described by Lowendahl (2005, p. 71) as being akin to "*herding cats*". With these arguments in mind, an advantage of having loyal clients is employee retention due to the higher levels of job satisfaction engendered (Gwinner, Gremler and Bitner 1998). Employee satisfaction has been associated with commitment to the employing firm in a CPS context (Leung, Chen and Yu, 2008).

The aforementioned arguments demonstrate the importance of client loyalty for CPS suppliers. A loyal client base can be the difference between success and failure for a firm. Retaining key accounts and receiving referrals is critical for PSFs, given that winning new business is expensive and difficult (Howden and Pressey, 2008). Despite this, the key drivers of client loyalty for CPS suppliers have attracted no known academic interest, which is a problem that this research aims to begin addressing.

1.4. Problem statement

Whilst a modest amount of research into client loyalty in other professional services exists (e.g. Cater and Zabkar, 2009; Trasorras, Weinstein and Abratt, 2009; Cater and Cater, 2010), there is none known that focuses on CPS. Knowledge of why clients in particular industries either remain loyal or terminate service relationships is key to helping suppliers achieve a strategic advantage (Wathne, Biong and Heide, 2001). CPS supplier-client relationships have been the subject of research. However, these studies focus on other outcomes, such as client satisfaction (e.g. Dainty, Cheng and Moore, 2003; Cheng, Proverbs and Oduoza, 2006).

The link between client expectations and repeat business for construction contractors outside the UK has been the subject of empirical enquiry (Egemen and Mohamed, 2006). However, the services delivered by professionals are arguably different from those of a non-professional nature (Von Nordenflycht, 2010; Von Nordenflycht, Malhotra and Morris, 2015). It has been argued that CPS are fundamentally different from other construction services (Seriki and Murphy, 2017). Therefore, the degree of inference that can made from research focusing on contracting firms is limited.

This research also seeks to achieve an understanding of the impact of the antecedent level (for a key contact employee [KCE] versus the firm as a whole). PSFs "*tend to sell to clients the services of particular individuals (or a team of individuals) rather than the services of the firm*" (Maister, 1982, p. 15). However, the impact on client loyalty of individual employees versus the firm collectively is poorly understood and has not been considered at all with respect to either CPS or wider construction services.

1.5. Research questions, aims and objectives

Having now defined the problem statement, this section states the research questions, and it sets out the aim and objectives. The research is guided by the main research question (RQ1) and supplementary research question (RQ2):

RQ1. *What are the key service-related antecedents of client loyalty to CPS suppliers?*

RQ2. *Which of the key service-related antecedents most effectively predict client loyalty to CPS suppliers?*

The aim of this research is to develop a model of strategic behaviour that will assist CPS suppliers build and benefit from client loyalty. This aim will be achieved via the following objectives:

- Identify the trait attributes of CPS suppliers that influence their clients' needs.
- Develop a conceptual model of the key-candidate service-related antecedents of CPS-client loyalty.
- Develop, refine, and validate the conceptual model of CPS client loyalty.
- Investigate the differential impact of KCE- and firm-antecedent levels on CPS-client loyalty.
- Determine which of the service-related antecedents best predict CPS-client loyalty within the wider population.
- Determine the degree to which CPS clients are motivated by rational versus relational antecedent factors.
- Provide recommendations for CPS suppliers, based on the research findings.

1.6. Benefits of the research

The primary purpose of this thesis is to help CPS suppliers to understand better what they should focus on to build and benefit from the loyalty of their clients. However, it may also help construction clients evaluate their own decision-making processes to achieve their project objectives. The appropriate selection of professionals is a key success factor for construction projects (Carr, de la Garza and Vorster, 2002; Cheng, Proverbs and Oduoza, 2006). Clients and service providers alike achieve benefits from longer-term relationships, such as better communication, shorter learning curves, mutual cost savings and quicker problem resolution (DBIS, 2013). Sustained CPS supplier-client relationships also improve outcomes for the wider group of stakeholders involved in and affected by construction projects and asset management activities.

Seriki and Murphy (2019, p. 772) argued that there is "*a dearth of academic enquiry*" associated with CPS generally. This is somewhat surprising, given the strategic importance of CPS to the construction sector. This research adds to the limited body of literature associated with CPS and the wider professional service industry.

1.7. Scope and boundaries of the research

This research focuses on the service relationships between CPS suppliers and their clients. CPS are defined by CIC (2008, p. 3) as "*architects, quantity surveyors, surveyors (other), building services engineers, civil and structural engineers, planners (town planners), project managers and multidisciplinary practices*". Within the UK Standard Industrial Classification (SIC) system, CPS encompass several categories: 7111 (architectural services), 71112 (urban planning and landscape architectural activities), 74902 (quantity surveying activities) and 74909 (other professional, scientific and technical activities). The

CIC definition is deemed to be more precise for the purposes of this research, given that the SIC categories may encompass built environment services that are technical rather than professional (Connaughton and Meikle, 2013).

It is feasible that relationships between CPS suppliers and their clients may differ based on the different sectors in which they operate (e.g. housing, highways, education). The aims of this study do not extend to examining the potential differences in CPS client relationships between different sectors. As a starting point to this line of enquiry, CPS are studied collectively. The justification for doing so is considered in Chapter 2 and during the qualitative phase of research (Chapter 6).

It should be noted that professionals from other domains, such as accountants and lawyers, are often integral to the delivery of construction projects (Jewell, Flanagan and Lu, 2014). However, this research focuses on the service relationships of suppliers belonging to the core group of construction professionals identified in the aforementioned CIC (2008) definition. The scope of the research is further limited to those operating in the Midlands, UK, on grounds of sampling practicability, which is explained further during the methodology discussion in Chapter 5.

This study is positioned primarily within the academic literature associated with construction management. This discipline most often focuses on the key roles that people play in the construction process (Abowitz and Toole, 2010). Therefore, undertaking this research necessitated the use of certain human-behaviour theories and the application of social science research methods.

This research is also underpinned by theories from the fields of relationship marketing and professional service research. The marketing practices of CPS suppliers have attracted some academic attention (e.g. Ojo, 2011; Lu *et al.,* 2013; Yankah, 2015; Treado and Brunswick, 2018), as have the marketing practices of

general construction services (e.g. Yisa, Ndekugri and Ambrose, 1996; Smyth, 2000). Additionally, marketing guidance has been written specifically for CPS suppliers (e.g. Richardson, 2005; Sawczuk, 2010). However, this research is not concerned with traditional marketing practices. Instead, it draws on theories from the field of relationship marketing, which is concerned with how suppliers can build and benefit from the relationships they have with their existing clients. Only one article could be found on the subject of CPS relationship marketing (Pheng and Gracia, 2002). Furthermore, this focused on the degree to which CPS suppliers have adopted relationship marketing practices, as opposed to its mechanisms. This thesis represents the only known research into CPS-client loyalty in the UK.

Winch (1989, p. 331) argued that, at the time of authoring that source, the bulk of construction management research focused on projects as opposed to the firms that deliver them, and that "*the project is a temporary organisation while the firm is a continuing capacity to create the built-environment*". Since that time, the literature has been added to through several studies focusing on CPS firms, as opposed to the project team (e.g. Connaughton and Meikle, 2013; Jewell, Flanagan, and Lu, 2014; Connaughton, Meikle and Teerikangas, 2015). Whilst the initial phase of this research explores the research questions from both sides of the client and supplier dyad, the follow-up quantitative study focuses solely on the attitudes and motivations of CPS clients. The rationale for this is that it is normally (but not exclusively) the client who decides whether a working relationship with a supplier is to be maintained or terminated (Maister, 1982). This research is intended to provide insight for CPS suppliers into understanding which service-related antecedents are most strongly predictive of client loyalty. It is not intended to explore either conflict or dysfunctional relationships deeply. A central tenet of this thesis is that there are service-related antecedents that result in clients being motivated to continue using and recommending CPS suppliers.

It must be stressed that this research does not aim to present a holistic model of CPS-client loyalty. There are a wide range of external ‘pull’ and ’push’ factors that have nothing to do with the service provider (Naumann *et al.*, 2010, p. 879). Client loyalty in a business-to-business service setting is a highly complex phenomenon. Bendapudi and Berry (1997) identified four factor groups that influence a client’s motivation to remain in a relationship: environmental factors, partner factors, customer factors and interaction factors. Additionally, Williams *et al.* (2011) stated that supplier-client-relationship bonds are affected by contractual lock-in, client industry issues, the length of the relationship, competitive intensity and inertia.

Suppliers should also be cognisant of the influence of the wider buying centre within client organisations, as well as their immediate point of contact (Zolkiewski *et al.*, 2007). A client may feel committed to a firm or their representative(s) but have only partial or minimal influence over the procurement decision. For example, an organisation’s senior management team may embark on an aggressive cost-cutting strategy centred on their supply chain. A client may suffer adverse market impacts, or undergo mergers or acquisitions, all of which are associated with changes in supply chain relationships. Briggs and Grisaffe (2010) demonstrated empirically that client loyalty in the business-to-business sector is moderated by the magnitude of industry competitiveness. By way of example, CPS suppliers suffered declines during the economic recession *circa* 2008 onwards, as construction clients sought to make savings via reorganising their supply chains (CIC, 2010). CPS suppliers serving construction contractors at this time saw client loyalty plummet due to the focus on survival and cutting every possible expense.

A final factor outside the control of ethically practising CPS suppliers is that of using bribery to induce service continuity. In an industry survey, 49% of the responding construction professionals believed that corruption is endemic within the UK construction industry (CIOB, 2013). Worldwide, only around half (51%) of

business leaders in the construction sector have confidence in their organisation's bribery and corruption controls. This is 18% below the industry average of 69% (Kroll, 2019). The possibility of inducement influencing clients' decisions when reviewing their supply chains must be acknowledged.

In summary, external influences, contractual arrangements and client characteristics undoubtedly influence their loyalty. However, the boundaries of this study must be made clear. This research has aimed to investigate the antecedents impacting on client loyalty, which CPS suppliers can influence via their service provision. Therefore, it has focused only on what Hennig-Thurau, Gwinner and Gremler (2002, p. 230) termed "*managerially controlled antecedent variables*", which are referred to in this thesis as "*service-related antecedents*".

A further objective has been to investigate the relative impact that client-facing employees have on loyalty, relative to the impact made by the firm collectively. This is important for managers of CPS firms as it will spotlight the benefits and possible risks of what is referred to as "*person*al loyalty" (Bove and Johnson, 2006, p. 240).

1.8. Research methodology in brief

Firstly, a detailed literature review was undertaken, from which a conceptual framework for CPS-client loyalty was developed. A phase of explorative qualitative research was then undertaken, the results of which were used to refine and modify the conceptual framework. Building on these results, a follow-up survey was conducted. The aim of this was to identify the strongest antecedents of CPS-client loyalty and determine the degree to which the key qualitative findings could be generalised to the wider client population of the Midlands, UK.

1.9. Literature review.

Literature searches during the writing of Chapters 2, 3 and 4 were conducted using both the University of Wolverhampton's online catalogue and Google Scholar. When reviewing the literature on wider professional services, searches were undertaken against the term 'professional service firm' and the commonly encountered initialism 'PSF'. Articles relating to the study of CPS were located using the search terms 'construction professional service(s)' and 'construction professional(s)'. This revealed the relative paucity of literature devoted to CPS as a collective focus of study. Master of Science (MSc) dissertations appearing in the search results were excluded on the grounds of not having been peer reviewed. Articles were read in full to ensure that they focused on one or more CPS professions. The paper authored by Lingard et al. (2007) was excluded on the basis that the cohort studied comprised students on CPS-related courses as opposed to industry practitioners. An article authored by Olatunji (2006, p. 436) was excluded as, despite having the term 'construction professional' in its title, it focused on building contractors. Searches made using the term 'property professional' yielded even fewer results and almost all were related either partly or fully to estate agencies. These were excluded from the scope of this research, as they are not listed within the CIS (2008) definition of CPS.

Searches were not made against an exhaustive list of each of the CPS sub-professions. However, where authors operationalised 'construction professional service' or 'construction professional' using single CPS professions, they were included in the review. The process involved reviewing a relatively large number of articles spanning several disciplines. NVivo 11 software was used to assist in the development of a coherent literature analysis. Articles were read, and a document created for each within the NVivo file. The findings and extracts were then coded

against the themes emerging from the literature review, to facilitate sense-making and argument synthesis. A summary of the sources used in the analysis of CPS literature is presented in Appendix A.

1.10. Style of the thesis

As well as being academically robust, scholarly research must involve "*telling a good story*" (Creswell and Plano-Clark, 2011, p. 252). This involves presenting a cohesive and compelling narrative. In addition to matters of structure, those of style of writing are also considered important. In writing this thesis, one challenge was to write in a way that was appropriate and sympathetic to mixed methods research. A conscious decision was made to remain in the third-person perspective when writing about both the qualitative and quantitative phases, with the aim of achieving a cohesive style.

1.11. Structure of the thesis

1.11.1. Chapter 1. Introduction

This chapter introduces the concept of CPS-client loyalty. It sets out the opportunities and risks for CPS suppliers, and the importance of client loyalty with respect to business survival and success. An argument is presented to justify the need for undertaking this research. The research questions, aims and objectives are detailed. Finally, an overview of the thesis structure is provided.

1.11.2. Chapter 2. Construction professional service suppliers

This chapter reviews the theories relating to the nature of CPS that could help explain client loyalty. An assumption underpinning this research is that CPS suppliers have distinct traits that set them apart from others in the construction industry. In turn, these service traits and characteristics influence client needs and

expectations. Based on an analysis of the literature, a professional-trait model is presented for CPS. This is used later to inform the conceptual model of CPS-client loyalty that is introduced in the following chapter.

1.11.3. Chapter 3. The concept and nature of client loyalty

In this chapter, the concept of loyalty is considered. A definition of client loyalty is defined in the context of CPS for the purposes of this research.

1.11.4. Chapter 4. Conceptual model of client loyalty

In this chapter the key-candidate service-related antecedents of client loyalty are identified. This focuses on those most likely to explain client loyalty in a CPS context. A conceptual model of CPS-client loyalty is presented at the end of the chapter.

1.11.5. Chapter 5. Methodology

This chapter sets out the methodology employed to address the research questions, aims and objectives. Firstly, the researcher's philosophical position is stated with the aim of explaining the knowledge-seeking strategy adopted. A mixed methods design was used. An argument is presented that explains why this was deemed necessary and how it adds to the richness and validity of the research findings. Finally, the methods used to undertake the qualitative and quantitative phases of research are explained.

1.11.6. Chapter 6. Qualitative analysis of results

This chapter presents the findings of the qualitative research phase. Data were gathered from semi-structured interviews, with a sample consisting of clients and CPS suppliers. The subsequent data analysis was used to identify the

predominant themes associated with client loyalty and its antecedents. Sub-themes for the main antecedents were developed, which were used to inform the operationalisation of the variables during the follow-up phase of quantitative research. The results of the thematic analysis (TA) are presented, showing the associations found between loyalty and its antecedents. The process by which the conceptual model was trimmed to include the key-candidate service-related antecedents of client loyalty prior to quantitative testing is explained.

1.11.7. Chapter 7. Quantitative analysis of results

This chapter sets out the results of the survey that sampled the wider population of CPS clients in the UK Midlands. The results of a factor analysis are presented, which explain the development of key constructs resulting from the data. The hypothesised relationships between the predictor variables (service-related antecedents) and outcomes (loyalty) are stated and justified. The results of the hypothesis testing are provided, along with the findings of the exploratory statistical analysis undertaken to help explain some of the findings. Finally, the results of the diagnostic statistical analysis are presented. An explanation is provided of the steps taken to check for and ensure that the results were not overly biased by the properties of the data.

1.11.8. Chapter 8. Validation of the results

Several expected results were obtained during the hypothesis testing, which support the findings of the qualitative research phase. However, some unexpected results were also gained. To validate the results and assist in the interpretation of several discrepant findings, a final phase of empirical validation work was undertaken. This was achieved by member checking, which involved obtaining feedback from a selection of the original interview participants on their opinions of

the overall results. Additionally, feedback was obtained from the participants of an assembled focus group, which was also undertaken to validate and help explain the findings.

1.11.9. Chapter 9. Discussion of the results

Firstly, several important findings are deliberated regarding the structure and dimensionality of certain constructs when tested in a CPS-client population. The chapter then focuses on discussing the relationships (or lack thereof) found between the service-related antecedents and client loyalty. The chapter concludes with a discussion of certain insights revealed during the investigation of multilevel (employee versus firm) antecedents of loyalty in the course of the qualitative research phase.

1.11.10. Chapter 10. Conclusions

In this chapter, the implications of the research findings are summarised. The contribution to knowledge and the theoretical implications are stated. Recommendations are provided for CPS suppliers regarding what they should focus on to build and benefit from client loyalty. No study is without limitations; therefore, those associated with this research are considered and the research process reflected on. Whilst this research contributes to the understanding of CPS-client loyalty, several related questions remain unaddressed. Consequently, suggestions are made for future research. Figure 1-1 illustrates the thesis structure.

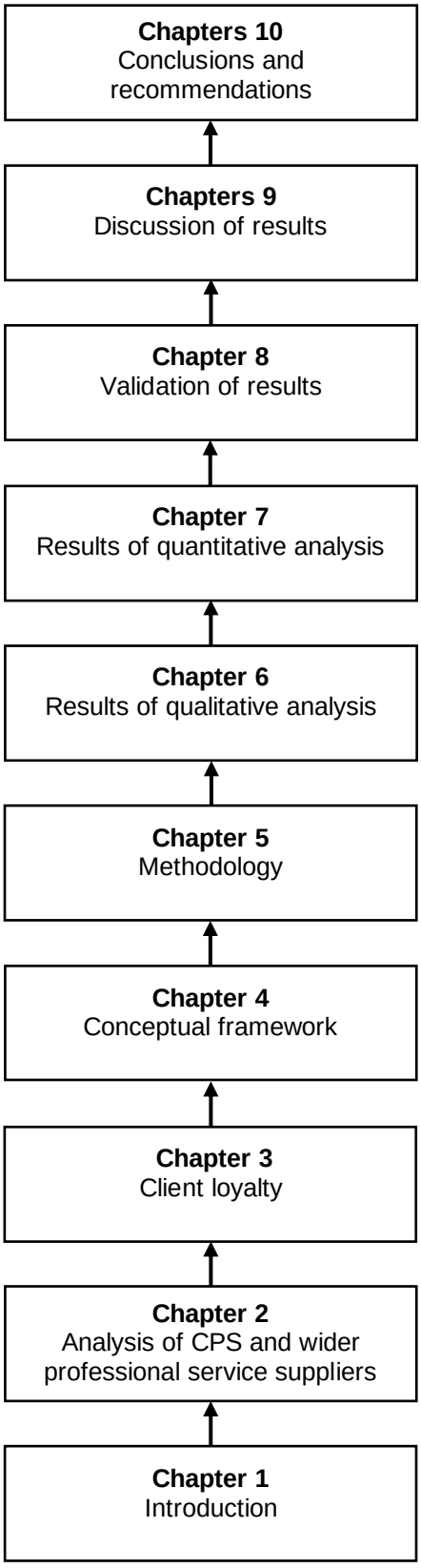


Figure 1-1. Organisation of the thesis.

1.12. Chapter Conclusion

This chapter has introduced the focus of this research. The gap in knowledge regarding CPS-client loyalty and the need to address it have been highlighted. The research questions, aim, objectives and methodology used to address the problem have been stated. Having provided an overview of the research, giving a comprehensive literature review is necessary to establish a full understanding of the study context. Chapters 2, 3 and 4 review and synthesise the literature, culminating in a proposed conceptual model of CPS-client loyalty.

Chapter 2. Construction professional service suppliers

2.1. Chapter Introduction

This chapter begins with a review of the literature on wider professional services and theories that differentiate professionals from other service providers. This is followed by an analysis of the degree to which construction professional services (CPS) conform to the academic definition of a professional service. This was necessary, given that theories from studies on wider professional services were used to identify the key-candidate service-related antecedents of CPS-client loyalty. Additionally, professional-trait theories were examined to identify the aspects of CPS with the potential to influence the pattern of client-loyalty antecedents.

This research considers CPS suppliers as a collective group. However, one must be cognisant of the potential for heterogeneity between the different sub-professions. First and foremost, they fulfil different client needs. For example (notwithstanding the full range of services they may offer), quantity surveyors prepare bills of quantities, architects design buildings, and general practice surveyors negotiate dilapidation settlements. In theory, these differences in outputs could result in different patterns of loyalty antecedents between the sub-professions. For this reason, an analysis of the CPS literature was undertaken to determine the appropriateness of studying the sub-professions collectively.

As stated in Chapter 1, the scope of this research does not extend to investigating all the multitudinous factors that could influence client loyalty. The focus is restricted to the aspects of service delivery that CPS suppliers can influence. However, for the purposes of completeness, the chapter concludes with a summary of the other client, project and economic factors with the potential to

affect clients' decision-making. The work undertaken in this chapter underpins and informs the next chapter, in which a conceptual framework for the service-related antecedents of CPS-client loyalty is developed.

2.2. Professional service firms

As a prelude to considering CPS, this section focuses on the wider group of professional service firms (PSFs) to which they belong. The evidence that differentiates professionals from the wider group of service providers is reviewed. This was necessary so as to justify the use of theories drawn from the literature on professional services to help explain CPS-client loyalty.

'Services' are an "*act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything*" (Kotler and Keller 2006, p. 402). Services of a professional nature have an even higher degree of intangibility, heterogeneity, inseparability and intangibility (Lian and Laing, 2007; Halinen and Jaakkola, 2012). Professional services are defined as those whose primary assets are "*a highly educated workforce […] whose outputs are intangible services encoded with complex knowledge*" (Greenwood *et al.*, 2005, p. 661). The consequential outcomes of professional service delivery are usually high (Rosenbaum, Massiah and Jackson, 2006). However, clients often find evaluating them difficult, even following delivery (Thakor and Kumar, 2000; Howden and Pressey, 2008). The quality of professional services can be difficult for clients to assess "*since they cannot be touched or seen*" (Campbell and Verbeke, 1994, p. 96).

The UK government categorises the professional and business services (PBS) sector as "*a range of diverse knowledge intensive industries*", which includes legal services, accountancy, market research, management consultancy, architectural and engineering activities (HM Government, 2018, p. 1). The PBS sector accounts

for almost 11% (£186 billion) of the UK economy's Gross Domestic Product (GDP) and 13% of jobs. The UK is a major exporter of these services, which comprise 27% (£66 billion) of service exports (DEIS, 2020). It is in the top three exporters of professional services from the 36 member countries of the Organisation for Economic Cooperation and Development (HM Government, 2018). Without professional services and their impact on shaping markets and setting standards, "*business as we know it would come to a grinding halt*" (Sharma, 1997, p. 758). Furthermore, the advice provided by PSFs and their institutional bodies is vitally important to the wider UK economy (HM Government, 2013).

The view of the PBS sector as a force for societal good is not universally accepted. Particularly damning is the view expressed by Johnson (1972) that professional bodies are elitist power bases hiding behind the language of altruism. Furthermore, it has been argued that professions deliberately construct barriers to market entry, enjoying the resultant economic privilege. Suddaby and Muzio (2015, p.28) consider the accusation that professionals engineer "*social closure*" via a system of certification and credentialing, which creates monopolies over large areas of economic activity. However, they conclude that, whilst social closure may be a result of professionalism, it is rarely a primary institutional motivation. Faulconbridge and Muzio (2008) considered the claim that elites within PSF hierarchies leverage the surplus profits created by subordinates. The counterargument to the accusations of exploitation is that junior employees benefit from their experiences, often having the opportunity for firm-sponsored professional development. Professionals have also been positioned as disseminators of neo-liberal capitalist ideology (Suddaby and Muzio, 2015). Therefore, they may be considered to be a force for good or ill, depending on one's worldview.

Despite certain criticisms, PSFs make undeniable contributions to society. Large accountancy practices have contributed towards introducing regulation that extends beyond the reach of national laws, reducing the risk of global corporate malpractice (Suddaby and Greenwood, 2005). Occupational safety and health professionals and their member bodies are active in setting standards to make construction sites and other workplaces safer (IOSH, 2016). The CPS institutions themselves contribute towards the development of building regulations, improve construction guidance and support government bodies in times of national disaster, such as the Grenfell Tower fire (RICS, 2017b).

PSFs have characteristics that distinguish them from other suppliers. It has been reasoned that they are extreme examples of knowledge-intensive organisations, and they are therefore of special interest as models for increasingly knowledge-based economies (Lowendahl, 2005). Implicit to the existence of a body of research on PSFs is the assumption that they share certain characteristics that set them apart from other firms. Therefore, whilst there may be important differences between professions, there are arguably aspects of homogeneity linking them as a distinct group (Von Nordenflycht, 2010).

A fundamental societal assumption is that professionals act in an ethical manner (Snizek, 1972). Ethics, in its broadest sense, describes the way in which we understand life in terms of right and wrong, specifically "*the moral principles by which a person is guided*" (Mason, 2008, p. 17). As Koene (1994, in Dinovitzer, Gunz and Gunz, 2015, p. 118) asked "*If professionals are not trustworthy, whom should we trust*?" The "*social bargain*" between professionals and societies referred to by Suddaby and Muzio (2015, p. 38) involves monopoly, power and privilege in exchange for expert advice and services delivered in an impartial and ethically sound manner. PSFs are guided by a formal ethical code policed by professional peers. Furthermore, there are societal and institutional expectations

that the PSFs place the interests of clients before their own (Sweeney, Soutar and McColl-Kennedy, 2011). However, Dinovitzer, Gunz and Gunz (2015) maintained that only the most egregious examples of ethical violations are ever brought to account by professional bodies.

Some of the earliest work on professional-trait theory was undertaken by Greenwood (1957, p. 53). He identified five key traits of professions: a body of knowledge, professional authority, sanction of the community, a code of ethics, and a professional culture. He argues that, for professionals, work is more than just an exchange of economic reward for services delivered and that "*it is never viewed solely as a means to an end: it is the end itself*". Hall (1968) and Snizek (1972) further categorised the different dimensions of professionalism. The structural dimensions of professionalism relate to institutional and socio-political factors. Attitudinal dimensions define the professional ethos of individuals. Gummesson (1978) pinpointed several professional service characteristics: qualified and accredited professionals, identity and speciality (e.g. an architect or a surveyor), the use of specialist knowledge to solve problems, and professional body regulation via the required adherence to formal codes.

More recently, Von Nordenflycht (2010) has rendered the extant models down to a smaller number of key professional service traits: knowledge intensity, a professionalised workforce and low capital investment. Von Nordenflycht, Malhotra and Morris (2015) have since added high service customisation and high service interaction to the list. The degree to which these different traits are expressed varies between the different professions.

Critics of professional-trait theories have existed from an early date. Johnson (1972) claimed that they fail to distinguish truly between professional and non-professional services, due to the presence of overlapping and shared characteristics. Furthermore, professionalism may be demonstrated over a

continuum. For example, Hearn (1982) argued that the line between professional and non-professional occupations is often blurred, with some workers occupying a middle ground between the two. Professionals are increasingly being employed within bureaucracies, such as government bodies and universities, diffusing professionalism within other types of organisations. CPS suppliers may find themselves working for clients who are themselves professionally qualified, altering the traditional PSF-client dynamic. Notwithstanding certain criticisms, there is deemed to be sufficient evidence to posit that professionals share key common traits that distinguish them from other service providers (Greenwood, 1957; Hall, 1968; Snizek, 1972; Gummesson, 1978; Chan, Chan and Scott, 2007; Von Nordenflycht, 2010; Von Nordenflycht, Malhotra and Morris, 2015).

The key defining professional trait dimensions reviewed earlier in this section are brought together and summarised in Figure 2-1. This comprises the structural and attitudinal traits originally developed by Hall (1968) and later refined by others (Snizek, 1972; Von Nordenflycht, 2010; Malhotra and Morris, 2009). Structural traits relate to low capital intensity, high knowledge intensity and self-regulation which are defining traits of professional service suppliers. Key attitudinal traits are adherence to ethical codes and a professional ideology. The service dimension relates to the relatively high degree of customisation and client-interaction that also typify professional services (Von Nordenflycht, 2010; Von Nordenflycht, Malhotra and Morris, 2015).

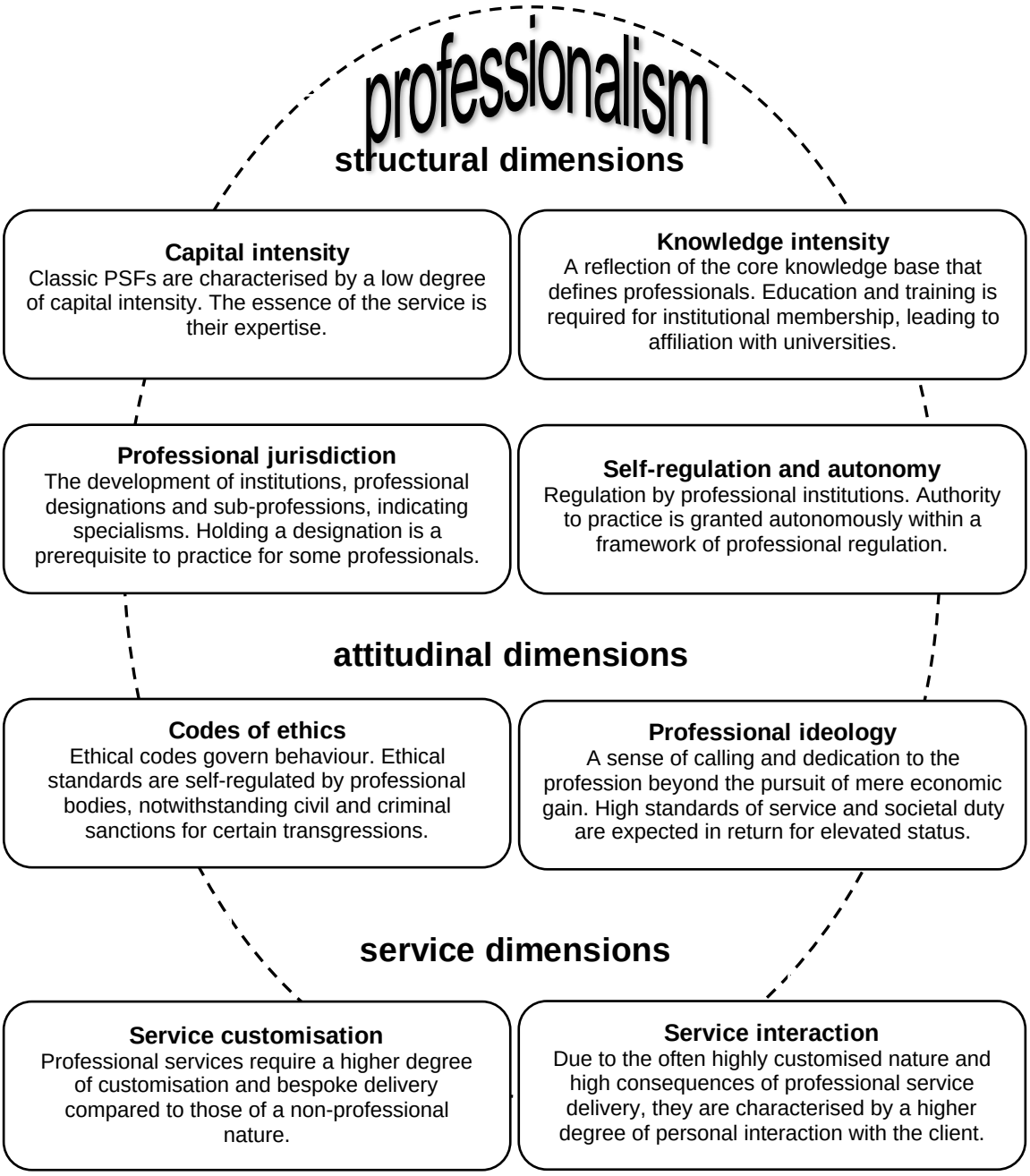


Figure 2-1. Professional-service-trait model.

Different professions vary in the degree to which they exhibit the different professional traits. In the next section, each of these traits is considered in more depth in the context of CPS.

2.3. Construction professional service suppliers

Firstly, this section summarises the evolution of the CPS sector in the UK and presents an argument for its inclusion within the academic definition of professional services. This is necessary to support the subsequent use of client-loyalty theories from wider professional service studies. Following this, an analysis of CPS professional traits is presented. This is necessary to identify aspects of their services that could make certain service-related loyalty antecedents important in a CPS context. The analysis concludes with the presentation of a CPS-professional-trait model.

In this thesis, CPS refers to professionals who specialise in the construction and built environment sectors (BES). The BES is defined as "*the accumulated residual history of mostly man-made environmental change*" (Brochner, 2016). The BES comprises a broad category of activities that includes services as well as actual building work (De Valence, 2019, p. 740). Services are distinguished from the traditional narrower definitions of construction that are defined only as "*on-site activity*" (Ive and Gruneberg, 2000, p. 9). The BES is strategically important for the wider economy. Worldwide, over 100 million people are employed in construction and allied services, shaping the environment in which people live and work (Ruddock, 2016). In the UK, it accounts for an average of 8–10% of GDP and employs 1.5 million people (Greenhalgh and Squires, 2011).

2.3.1. The history of construction professional services

CPS have a long and venerable history, having been important to human civilisations since ancient times. The origins of most organised CPS collectives can be traced back to the UK (Chan, Chan and Scott, 2007). The first CPS professional body to gain a Royal Charter was the Institution of Civil Engineers in 1828. This was followed by the Royal Institute of British Architects (RIBA) in 1837

and the Royal Institution of Chartered Surveyors (RICS) in 1881. Several other CPS professional bodies also gained chartered status during the 20th Century. These include the Chartered Institution of Building Services Engineers (CIBSE), the Royal Town Planning Institute (RTPI), the Institution of Structural Engineers (IOSE), the Institute of Civil Engineers, and the Chartered Institute of Building (CIOB). The most recent Royal Charter gained by a CPS body was by the Chartered Association of Building Engineers (CABE) in 2013.

Certain events and government policies during recent history have shaped the modern CPS sector in the UK. During the 1980s and 1990s, most of the CPS work formerly delivered by the public sector was outsourced or delivered by newly privatised bodies. The National Building Agency closed in 1981. Following this, other government bodies (such as the Property Services Agency, the National Economic Development Office and the Building Research Establishment) were either closed or privatised. Following the introduction of the Building Act 1984, competition with local authority building control offices was created by the provision for private sector approved inspectors (Charlson, 2020). Many construction professionals moved into the private sector because of the substantial withdrawal of the public sector from construction work (Connaughton and Meikle, 2013). At the same time, deregulation occurred. Mandatory fee scales for CPS had effectively been abolished by the mid-1980s (Hoxley, 2000a). The effect of free-market economics resulted in price competition within the CPS sector. This has been particularly fierce during subsequent periods of recession, when supply outstripped demand.

As well as the shift from the public to the private sector, CPS firms changed. During the early 20th Century, most were unlimited liability partnerships. In more recent years, because of deregulation and consolidation, CPS firms have more commonly become limited liability companies (Connaughton and Meikle, 2013).

Whilst most CPS suppliers are microbusinesses or small to medium-sized enterprises (SMEs), the sector is dominated by a small group of large firms. Whilst this group comprises only 2% of CPS firms in number, they have a combined share of ~80% of the market. Most of the biggest-earning CPS suppliers in the UK are public limited companies. However, this group of large, dominant firms includes several that are privately owned (Building, 2017).

With respect to company size, there is arguably a lower incentive for CPS firms to grow compared to those operating in certain other sectors. Economies of scale cannot be achieved by growth, due to the near total reliance on human capital. Furthermore, CPS are difficult to codify for the purposes of delivery using lower-skilled and lower-paid workers. For growing CPS firms, the opportunities for achieving cost savings are restricted mainly to the consolidation of headquarters and back-office functions (Jewell, Flanagan and Lu, 2014). Therefore, the main advantages of growth are enhanced reputation and market penetration, rather than achieving cost efficiencies.

2.3.2. Construction professionals and professional service theories.

Architectural, engineering and related professionals are included within the PBS sector (HM Government, 2018, p. 1). The perception of CPS suppliers as archetypical PSFs is also implicit in the academic literature. Whilst the legal and financial sectors have been the most frequently studied professions, CPS have also been used as the vehicle of study for researchers seeking to understand or define professional services. These include examinations of professional-firm competitiveness (Amonini *et al.,* 2010), workplace analysis (Brock, Leblebici and Muzio, 2013), governance (Guzak and Rasheed, 2014), reputation (Harvey and Mitchell, 2015) and size effects (McColl-Kennedy *et al.*, 2008). Furthermore, construction service disciplines are included in the highly cited article of Von

Nordenflycht (2010), which proposed a taxonomy of PSFs. The empirical study of Chan, Chan and Scott (2007) demonstrated that CPS firms possess the key professional traits identified by Hall (1968) and Snizek (1972). Jaafar, Aziz and Wai (2008) maintained that CPS such as chartered surveyors are classic professional services because they use their expertise to deliver customised services. In common with other professionals, CPS firms co-create their services with the client via intensive interaction during the scoping of the service and the delivery of projects (Fong and Choi, 2009). Indeed, the process of co-production can be taken to extremes, with powerful clients going so far as subordinating the role of the professional by pushing through the client's vision for a building design (Blau, 1987).

2.3.3. Construction professional service research to date

An analysis was undertaken of the extant CPS literature to determine if any research addressing the questions considered during this research exists. Figure A1 (Appendix A) shows the range of research topics that have been addressed using CPS as the focus of study. The largest proportion (21%) of CPS articles reviewed fall into the 'economics and business strategy' category. This is due to the breadth of the category rather than significant recurring trends in the literature, comprising subjects as diverse as international competitiveness (Jewell and Flanagan, 2012), competitive tendering (Hoxley, 2000a, 2001, 2007), domestic business strategy (Jewell, Flanagan and Lu, 2014) and economic cycles (Lu *et al.*, 2013). Whilst marketing strategy was the subject of 11% of the reviewed CPS-related articles, they focus mainly on the prevalence of marketing practices (e.g. Jaafar, Aziz and Wai, 2008; Ojo, 2011) or traditional topics such as the marketing mix (Pheng and Ming, 1997). Only one CPS article was found that focused on relationship marketing, specifically the degree to which it has been adopted

amongst quantity surveyors in Singapore (Pheng and Gracia, 2002). No articles could be found at all regarding CPS-client loyalty.

In terms of the geographical range of CPS studies 35% of the articles concentrate on populations from the UK (Figure A2, Appendix A). It must be mentioned that most UK studies originated from the relatively prolific scholars Carol Jewell and Robert Flanagan (e.g. Jewell, Flanagan and Anac, 2010; Jewell and Flanagan, 2012; Jewell, Flanagan and Lu, 2014), as well as Michael Hoxley (e.g. Hoxley, 2000a,, Hoxley, 2001; Hoxley, 2007). Some 26% of articles centred on CPS firms operating in Africa, 18% of which were from Nigeria.

2.3.4. Knowledge intensity of construction professional services

Knowledge intensity is a defining characteristic of professional services. This is a condition where a firm's service output relies on the substantial body of expert knowledge possessed not just by its executives but also by its front-line workers. To be classed as professional knowledge, it must lead to skills and attributes that are difficult to emulate and that require substantial training and investment to obtain.

Notwithstanding the routes for the development of senior professionals, qualification to full membership of CPS institutions normally involves attaining an accredited degree first. This is then followed by a period of structured training, culminating in a peer-evaluated final assessment (RIBA, 2017b; RICS, 2017). The ability to lay exclusive claim to an area of knowledge is central to attaining professional status. This knowledge can be engrained within firms, but it is typically held by individuals. CPS are highly knowledge intensive (Jewell, Flanagan and Anac, 2010). Knowledge and individual competence are a key competitive advantage for CPS suppliers (Connaughton and Meikle, 2013).

There are different types of professional knowledge, which can be described as normative, technical and syncretic (Halliday, 1987). Normative knowledge is associated with matters of value judgement. Lawyers predominantly deal with the normative knowledge used to deal with issues of justice and social contracts. Technical knowledge is derived empirically from observation and scientific enquiry. Malhotra and Morris (2009) stated that engineering professionals work mainly with technical knowledge. Syncretic knowledge spans both normative and technical epistemological bases. Construction professionals (e.g. surveyors, architects and civil engineers) all work with regulatory and professional codes that are highly technical. However, given the unpredictable nature of construction and the BES generally, context-specific judgements must often be made during the use and interpretation of information. Thus, it is argued that CPS work with both technical and syncretic knowledge.

2.4. A professional-trait model for construction professional services

The previous part of the chapter reviewed the traits common to PSFs, according to extant evidence and theories. However, very few articles consider the variability of these traits between professions. However, very few articles consider the variability of these traits between different professions. Malhotra and Morris (2009, p.895) argue that there is a disturbing tendency within the literature to generalise findings between completely unrelated professions, despite inter-profession comparison studies being “non-existent”.

Few scholars have considered professional-trait heterogeneity, with certain notable exceptions (Malhotra and Morris, 2009; Von Nordenflycht, Malhotra and Morris, 2015). The authors of both articles posit that there are indeed trait differences between professions. Therefore, in this section, evidence from the

literature is used, considering each professional trait in turn, to build a model specifically for CPS.

2.4.1. Service customisation

Professional service delivery is characterised partly by a higher degree of service customisation (Harlacher and Reihlen, 2014). This involves the process of "*bundling knowledge, held by individual professionals and collectively in the firm, in myriad ways to address different client's unique problems*" (Von Nordenflycht, Malhotra and Morris, 2015, p. 142). Without a certain degree of service customisation, a service cannot be classed as professional. However, the degree to which different professionals customise their services tends to vary along a continuum. Some specialise in very bespoke specialist services, whereas others adopt a more standardised approach.

Architectural and engineering work tends to be highly bespoke and project specific, whereas a financial audit carried out by a chartered accountant is, by comparison, more standardised. Examples of standardised CPS include valuation and residential surveying, at least in the context of work associated with multiple properties of the same archetype. However, what appears on the surface to be a standardised service may in fact require significant customisation. All CPS (whether they are a building survey, a design or a cost plan) are, to some extent, co-created with the client during the scoping process. In some cases, co-creation can extend to the delivery phase via variations. CPS are therefore characterised by a high degree of service customisation and client interaction (Jewell, Flanagan and Lu, 2014).

2.4.2. Professional jurisdiction

A defining characteristic of professional services is professional jurisdiction (Harlacher and Reihlen, 2014). This is a form of social closure that allows professionals to monopolise their field of practice, entailing the formation of a professional body that accredits members and establishes standards of behaviour. At the extreme end, this is backed by the state, and institutional membership is legally required to practice (Gross and Kiesser, 2006).

CPS suppliers enjoy professional jurisdiction (varying degrees, depending on the sub-profession), muting competition from those without relevant professional qualifications. For surveyors, professional institution membership is considered to be prestigious and a differentiating factor (Hackett and Hicks, 2007; RICS, 2014). Members of the RIBA enjoy an even stronger degree of professional jurisdiction, given that the designation ‘architect’ is protected by law (RIBA, 2017c).

Malhotra and Morris (2009) declared that professions with stronger knowledge jurisdiction and social closure are more likely to resist specialisation diversity. This is apparent for CPS, given that surveyors have many more pathways to qualify and practice than architects (RIBA, 2017b; RICS, 2017c). However, even architects do not have as much jurisdictional control as certain other professions. For example, having a professional qualification is not a legal requirement to practice for any CPS discipline in the same way that it is for a doctor (British Medical Association, 2017) or lawyer (The Law Society, 2020).

2.4.3. Self-regulation and autonomy

Profession self-regulation is associated with the delegation of state powers to professional institutions. In this respect, society grants professional communities freedom from external regulation in return for the commitment to regulating their

member's conduct (Lester, 2016). In common with other professions, CPS professional bodies operate codes of conduct with standards enforced by regulatory boards (RIBA, 2005; IOSE, 2014; CIOB, 2015; RICS, 2017d).

Von Nordenflycht, Malhotra and Morris (2015, p. 145) opined that professional institutions employ behavioural codes to mute competition amongst their members, as "*unfettered competition among providers of professional services is a threat to* [the] *trustworthiness of professionals in the eyes of clients*". This may take the form of professional codes explicitly prohibiting commercial behaviour and soliciting other firm's clients. No UK CPS professional body goes so far as to set fee scales. Price-fixing was abolished several decades ago as part of the governmental deregulation of the CPS sector (Hoxley, 2000). However, all CPS professional bodies have similar rules with respect to avoiding false or misleading advertising. Amongst the most stringent rules on commercial activity are those of the IOSE, which prohibit "*extravagant or self-laudatory language*" in advertising and publicity material (IOSE, 2014, p. 8). RIBA prohibits soliciting other firm's clients, but only in the case of former employees where there is a contractual obligation not to do so. In summary, CPS conform to the self-regulating and autonomous professional service characteristic.

2.4.4. Professional ideology

All professionals have an ideology. Most professional ideologies incorporate some sense of social utility, i.e. a sense of responsibility to clients and society at large. CPS suppliers are no different. However, they have their own ideology. CPS practitioners consider the wider societal-responsibility aspect of professional ideology to be less of a priority than personal reputation and fulfilling their responsibilities to clients (Chan, Chan and Scott, 2007; Fan and Fox, 2009). As well as being a requirement of institutional codes (RIBA, 2005; IOSE, 2014; CIOB,

2015; RICS, 2017b), delivering services to a high level of quality is perhaps a reaction to client expectations and market demands.

2.4.5. Interaction intensity

Professional services are often highly customised and involve the dissemination of expert knowledge as a means of solving clients' problems. Therefore, a relatively high degree of supplier-client interaction is involved during their delivery. This results in the effect of interactional and relational factors being particularly important for successful delivery (Schertzer, Schertzer and Dwyer, 2013).

However, the professions vary with respect to the level of client-supplier personal interaction involved. Certain professional services (such as legal due-diligence work) require sense-making of large amounts of documented information. This can be carried out remotely with minimal input from the client. In contrast, CPS delivery usually requires a high degree of client interaction, given that interpersonal communication is required during the scoping and delivery of services (Malhotra and Morris, 2009; Walsh and Gordon, 2010). In the context of project work, Von Nordenflycht, Malhotra and Morris (2015, p. 149) argued that less-experienced clients require even more interaction in the form of *"hand holding and continuous assurances"*. Interaction levels are also likely to be high, even for experienced CPS clients, due to their demands for consultation and the opportunity to participate in the process. This is relevant with respect to the later application of loyalty theories, as relational antecedents are especially important in other high-interaction professional services (Cater and Cater, 2010; Stringfellow, 2017).

2.4.6. Capital intensity

Capital intensity is the degree to which non-human assets are required to deliver the service. It is independent of knowledge intensity and varies between

professions. For example, a medical practitioner possesses at least as much specialist knowledge as a lawyer. However, the delivery of healthcare services requires a far higher degree of capital intensity due to the need for medical equipment and specialised premises.

In a construction context, integrated firms delivering design-and-build projects may demonstrate substantial knowledge intensity. Unfortunately, they require large amounts of capital, plant and machinery compared to an architectural or surveying practice that delivers only design and consultancy services. Capital-intensive industries need to raise considerable investment. This means that shareholdings are likely to belong to others outside of the senior management team. In such instances, the barriers to entry for new firms are higher due to the capital investment required, resulting in lower levels of individual employee bargaining power. In contrast, professional firms with lower capital-intensity requirements are more likely to be in private ownership with shares held by senior individuals within the firm. Their largest problem is likely to be talent retention, hence the common partnership model with incentives offered by way of deferred compensation via share options and promotion to partner status. The problems involved with managing and retaining a professional workforce are more considerable because that capital intensity is normally low. "*The assets may go down the elevator each night*", and the firm may struggle to retain them due to the relatively low cost for employees to start up their own practices (Von Nordenflycht, Malhotra and Morris, 2015 p. 150–151). The relative ease with which new practices may spring up due to low capital-intensity requirements has the attendant effect of increasing market competitiveness.

It is inevitable that CPS firms that adopt a strategy for growth evolve a more complex bureaucratic structure, which requires the allocation of more non-human assets (Jewell, Flanagan and Lu, 2014). However, the essence of CPS suppliers

is deemed to be their individual and collective knowledge and expertise. For this reason, for the purposes of this research, CPS suppliers are deemed to have minimal capital intensity.

2.4.7. Ethics

Professional ethics for CPS suppliers relate to the moral issues arising during the application of their specialist knowledge (Poon and Hoxley, 2010). The requirement for ethical behaviour may even transcend the process of service delivery. For example, CIOB (2015), RIBA (2017c) and RICS (2017e) all have requirements within their professional codes for ethical behaviour, both inside and outside the workplace.

There are several ethical principles expected by CPS bodies. These include avoiding bringing the profession into disrepute, avoiding conflicts of interest and avoiding dishonest behaviour. Such requirements have arisen because of the perceived importance of societal responsibilities. Poon and Hoxley (2010, p. 64) state that "[CPS] *professions can only survive if the public have confidence in them*". Bowen *et al.* (2007, p.268) discuss the key ethical challenges facing the construction industry, such as negligent professional service delivery and poor levels of integrity. This was highlighted by the Office of Fair Trading (OFT) investigation in 2008, which concluded that cover pricing (bid collusion) is endemic in the construction industry. Ethical issues relating to CPS suppliers have been investigated in in other countries, including South Africa (Bowen *et al.,* 2007) and Hong Kong (Fan and Fox, 2009). However, this aspect has arguably been under-researched in the UK.

Mason (2008) called for the creation of a single industry-wide code based on the Society of Construction Law's Statement of Ethical Principles. However, whilst they share many principles, different CPS bodies refer their members principally to

their own ethical standards (CIOB, 2015; RIBA, 2017c; RICS, 2017a). CPS bodies such as RICS act against ethical violations (Modus, 2017a, 2017b). The societal expectations of CPS and institutional impositions on members to practise ethically appear to be as stringent as for the other classic professions. With respect to the professional-trait model, there is strong evidence of established ethical codes for CPS firms and institutional requirements for ethical practice.

2.4.8. The professional-trait model for construction professional services

Earlier in this Chapter, Figure 2-1 was presented which summarised the key professional service traits reviewed in Section 2.2. Figure 2-2 which follows in this section is a version of the same model with a trait analysis specific to CPS superimposed on it. This uses the findings of the review presented earlier in this section (2.4). This model will be used to inform the subsequent analysis of service-related loyalty antecedents, specifically regarding which of them are likely to be the most important in CPS supplier-client relationships.

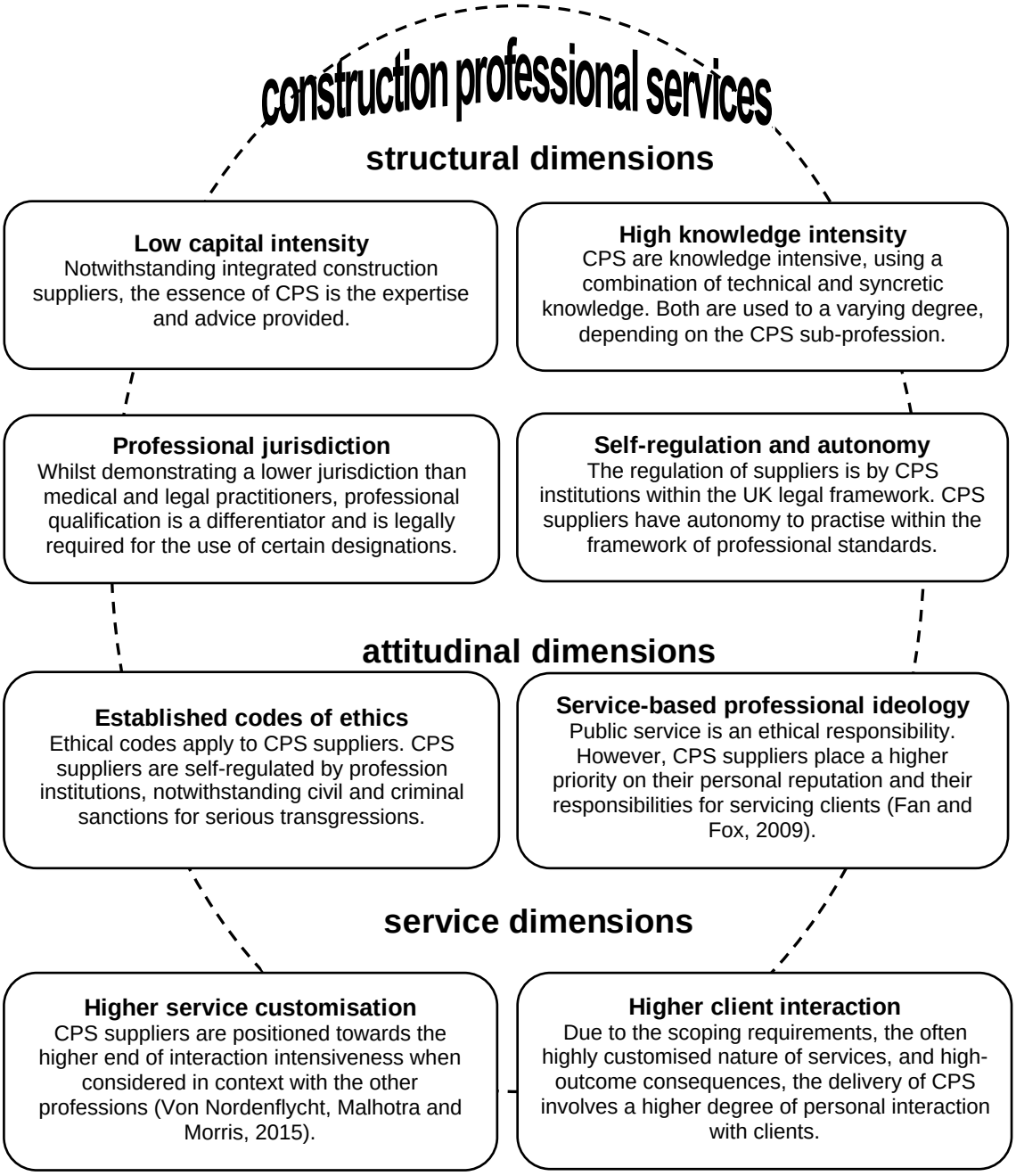


Figure 2-2. CPS professional-trait-analysis model.

2.5. Homogeneity of construction professional service suppliers

This section presents the argument for treating the various CPS sub-professions as a homogenous collective for the purposes of this research. A premise of this thesis is that client-loyalty antecedents are common to the different sub-professions. Thus, (specific deliverables aside), it is proposed that the clients of

surveyors, architects and other CPS suppliers have similar needs and expectations. Others have stated or implied that this is the case. Although an architect by training, Sawczuk (2010) argued that the service-marketing principles he advocates are applicable across the broader CPS sector. Chan, Leung and Yuan (2014) stated that construction professionals of different sub-disciplines face similar job adversities in terms of task complexity, tight deadlines and often-adverse working relationships.

Something all CPS professionals have in common is their use of human capital to deliver knowledge-intensive services (Jewell, Flanagan and Anac, 2010). The nature of construction is often dynamic, is time-consuming and requires working with multiple diverse disciplines. Therefore, it is reasonable to believe that clients expect the same degree of responsiveness and flexibility from a building surveyor, a quantity surveyor and an architect.

The consequences of outputs for all the CPS sub-professions are substantial. Therefore, similar demands are likely to be required for competency and advice that helps clients achieve their project goals. Furthermore, there exists a degree of fluidity between different CPS sub-professions. Chan *et al.* (2002) identified a broad trend across construction professions in resisting rigid discipline boundaries. Of the CPS practitioners surveyed, 40% had gained professional qualifications and/or institutional memberships outside the body in which they were first qualified. This is not a new development, as Heap (1973, in Chan *et al.,* 2002 p. 45) noted changes in professional identity, stating "*The lines between the separate functions in different professions were becoming increasingly blurred*."

Figure A3 (Appendix A) shows that 53% of reviewed CPS-related articles present the results for CPS collectively, with no breakdown by sub-profession. From this it can be inferred that CPS are a homogenous group by virtue of the research design of these studies. Of the articles, 25% focus on only one sub-profession.

Claims are made in several such articles that their findings are generalisable to CPS. However, little justifying rationale is provided for doing so. Only 21% of the articles reviewed provide results with a breakdown of findings by different sub-profession. Of these, less than half report finding differences between sub-professions with respect to their research topics. Some differences have been found between design and non-design professionals, regarding leadership style (Oke, 2013) and team roles (Olatunji *et al.*, 2014). Additionally, architects have been found to place greater value in the "*freedom*" and "*challenge*" aspects of their work than other CPS professions (Akiner and Tijhuis, 2007, p. 113).

In summary, the authors of most of the reviewed articles consider CPS to be homogenous for the purposes of study, by virtue of either their research design or findings. Therefore, based on the approaches and findings of extant studies, it has been deemed appropriate to treat CPS suppliers collectively for the purposes of this research. Researchers advancing this line of enquiry may be minded to explore empirically any potential differences in the loyalty antecedents between the CPS sub-professions. However, as a starting point, CPS suppliers and their clients have been considered collectively.

2.6. Impact of professional traits on client-loyalty antecedents

Evidence is presented in Section 2.4.2. to support the argument that CPS fit the definition of a classic professional service. Additionally, a professional-trait model particular to CPS has been developed based on the evidence from the literature (Figure 2-2). In this section, the potential impact of these professional service traits on the pattern of service-related antecedents for client loyalty are considered. CPS deliver knowledge-intensive services (Jewell, Flanagan and Anac, 2010; Connaughton and Meikle, 2013; Von Nordenflycht, Malhotra and Morris, 2015). They also provide an important function by acting as a communication bridge

between clients and contractors (Dosumu and Aigbavboa, 2019). The potential gap in understanding between professionals and their clients is referred to as "*information asymmetry*" (Sarapaivanich and Patterson, 2015, p. 886). Clients may lack the requisite skills, knowledge and expertise to diagnose their own needs, discriminate between a range of possible options, or evaluate outcomes. Communication effectiveness is therefore likely to be important, due to the complexity of the information dealt with and the high level of interaction required during service co-creation. Theories from other professional service studies focusing on the importance of the interaction experience and co-creation process are therefore deemed likely to help explain CPS-client loyalty.

The literature-analysis findings suggest that CPS are often highly customised, involving substantial input from clients as part of the briefing process. CPS are therefore positioned towards the higher end of professional services' interaction intensiveness (Malhotra and Morris, 2009; Von Nordenflycht, Malhotra and Morris, 2015). Whilst requirements will vary betweenjobs and sub-professions, all CPS commissions require scoping and a degree of co-creation with the client. Consequently, it is not just the tangible outcomes that are likely to be important to clients, but also the relational aspects associated with delivery, such as trustworthiness and likeability.

Another impact of having higher knowledge intensity is that a CPS supplier could become engrained within a project. The associated costs and risks of losing project- or asset-specific knowledge can reduce clients' inclination to terminate supply relationships with property professionals (Levy and Lee, 2009).

Service quality is an important determinant of CPS suppliers' competitive advantage (Abdul-Rahman, 1996; Poon and Hoxley, 2010; Jewell, Flanagan and Lu, 2014). Whilst there are certain institutional expectations regarding social utility (IOSE, 2014; RIBA, 2017c; RICS, 2017), the findings of Fan and Fox (2009)

suggest that CPS suppliers have a service-focused ideology. The implications of this are that CPS suppliers place priority on meeting the expectations of clients and maintaining their professional reputation. This has been deduced to be in response to market demands and personal goals, as well as societal expectations. Service quality in wider professional service contexts has been positively associated with client loyalty (Eisingerich and Bell, 2007).

CPS firms operate with a degree of autonomy within a self-regulated institutional framework, notwithstanding the civil and statutory governance of criminal law transgressions. In the UK, CPS suppliers operate in a free-market economy. The impact of this is a competitive CPS market in which value for money is likely toinfluence the selection of suppliers. It has been demonstrated in other business-to-business professional service markets that clients are motivated by the institutional goal of achieving value from their supply chains (Palihawadana and Barnes, 2004; Trasorras, Weinstein and Abratt, 2009). Figure 2-3 summarises the suggested impacts of CPS professional traits. These insights will be built upon and used during the development of the conceptual model for CPS-client loyalty in Chapter 4.

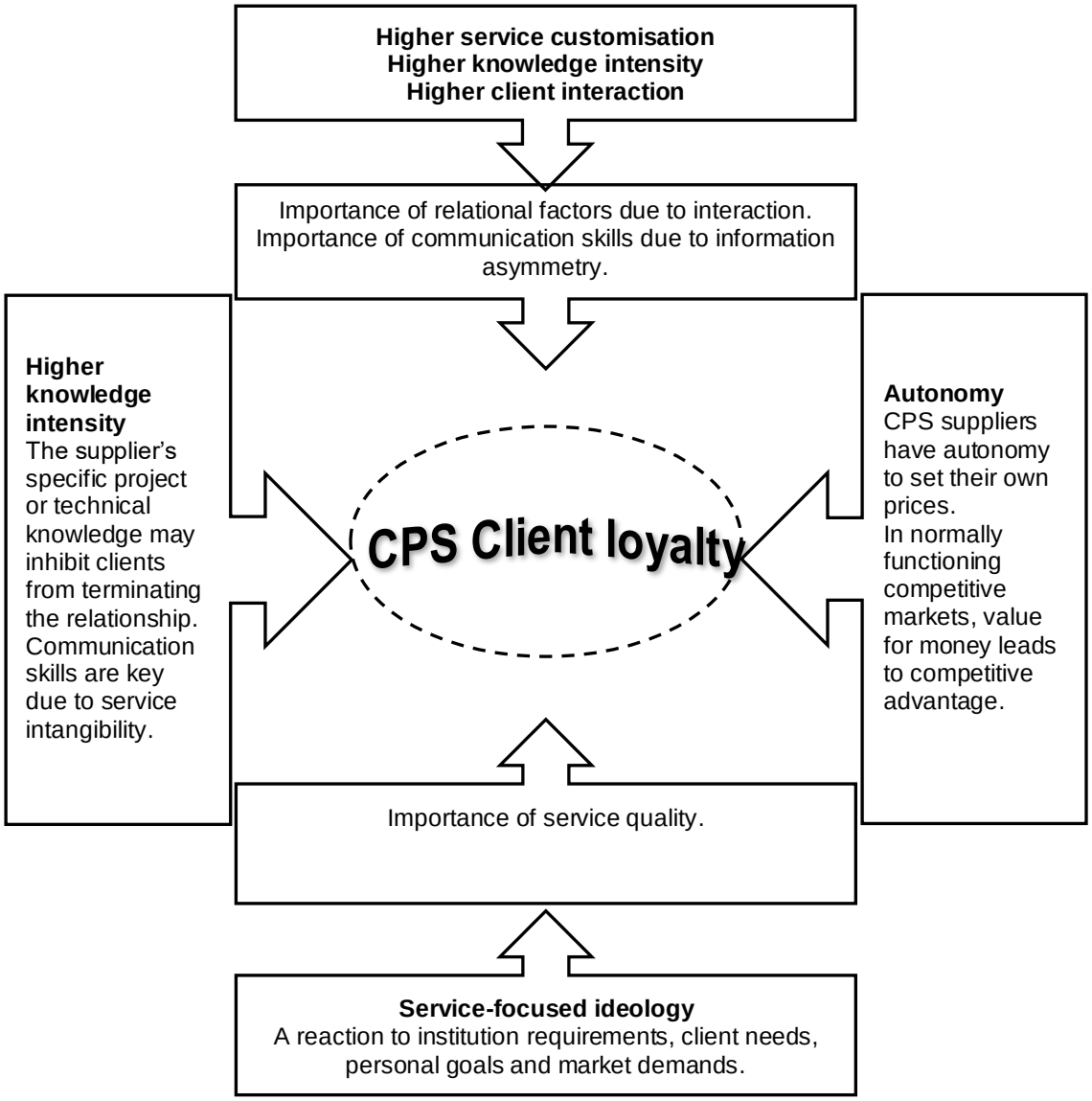


Figure 2-3. Consequences of CPS professional traits on loyalty antecedents.

2.7. Client and project heterogeneity

Up to this point, the analysis has focused on the characteristics of CPS suppliers regarding supply-relationship outcomes. However, CPS suppliers are but one-half of a dynamic relationship. The focus of this research is ultimately concerned with what CPS suppliers can do to develop client loyalty via the provision of their service offerings. However, it would be remiss not to mention the impact of client heterogeneity, given that it is normally the client who decides if a professional relationship continues or is terminated.

There has been a tendency within professional service research to focus on the service suppliers, whilst assuming that clients remain homogenous and static (Alvesson *et al.,* 2009). The term 'client' has been defined by the former British Property Federation as "*the person(s) or firm responsible for initiating, commissioning, promoting and paying for the design and construction of a facility*" (Kamara, Anumba and Evbuomwan, 1999, p. 8). The Construction (Design and Management) Regulations (2015) provide the more succinct definition of "*organisations or individuals for whom a construction project is carried out*" (HSE, 2015, p. 6). Both definitions acknowledge that the client role is often fulfilled by more than one person, particularly on larger projects.

Each client on a construction project is unique (Boyd and Chinyio, 2006). Clients in the construction industry are wide ranging and diverse, each with their own requirements (Mbuaga *et al.,* 1999). Construction clients differ in several respects, such as the size of their employing organisation and the sector in which they operate (Pryke and Smyth, 2006). Additionally, the degree of knowledge and experience that clients possess varies greatly and has an impact on project outcomes. Clients can be uninformed, partially informed or well informed (Boyd and Chinyio, 2006). Alvesson *et al.* (2009) categorised the clients of PSFs with respect to the management style in which they deliver the client role as follows: alphas (active and dominant), betas (compliant and consultative) and gammas (studious and reflective). Construction clients display different personality traits. For example, some clients are more trusting than others (Smyth, Gustafsson and Ganskau, 2010). In the same manner, clients are likely to vary across a continuum with respect to the importance they place on CPS likeability versus the quality of their service outputs. Figure 2-4 illustrates the key sources of CPS-client heterogeneity at both organisational and individual levels, which have the potential to impact upon loyalty to CPS suppliers.

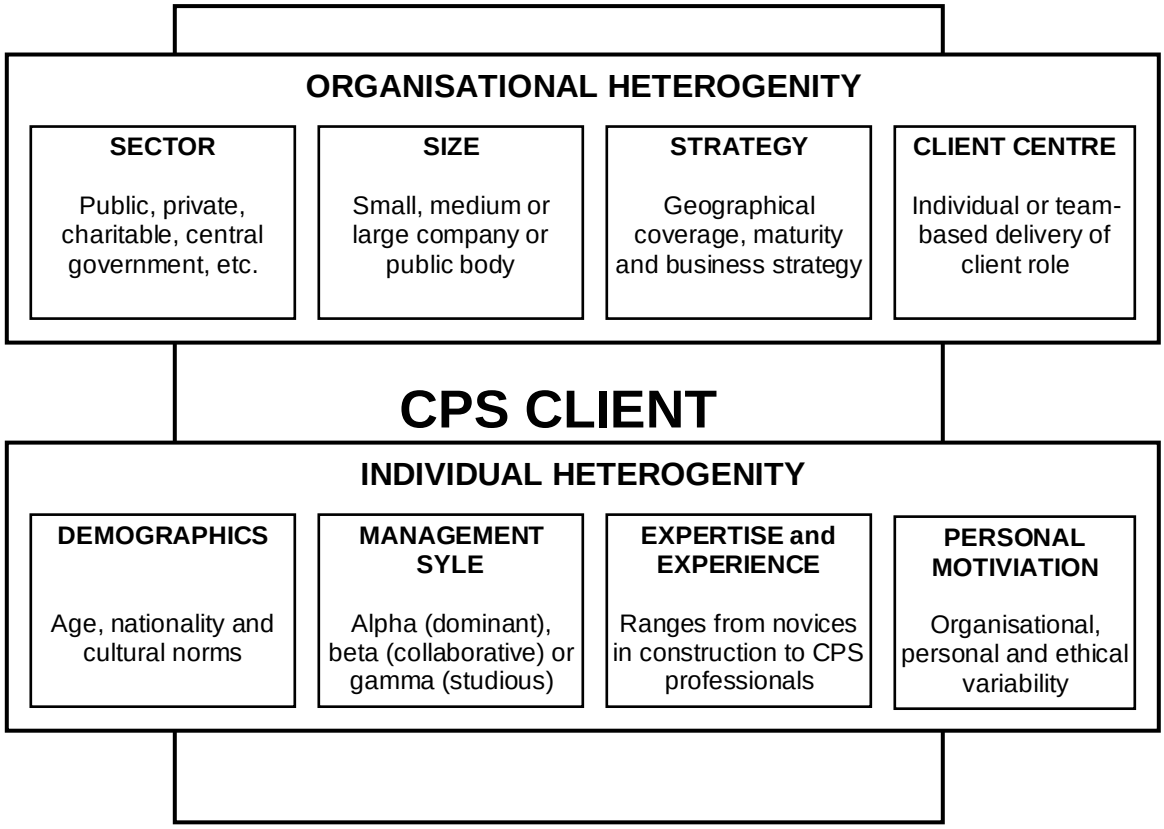


Figure 2-4. Potential sources of client heterogeneity impacting upon loyalty.

There are clearly several areas of client heterogeneity that can impact on CPS supplier-client relationships. The situation becomes even more complex when the interaction of client, CPS supplier and project factors are considered in unison. For example, an inexperienced client with responsibility for a very complex project will present a very difficult challenge to a CPS supplier. However, a simple project delivered for an experienced client is likely to be far more straightforward (Kamara, Anumba and Evbuomwan, 2002).

Looking more broadly at the range of factors that can impact on CPS supplier-client relationships, Bendapudi and Berry (1997) originally identified four criteria groups that influence clients' motivation to remain in a relationship: environmental factors, partner factors, customer factors and interaction factors. Figure 2-5 presents a model of the wider range of variable factors that can impact on client loyalty, including the client, the supplier, and the project or service itself.

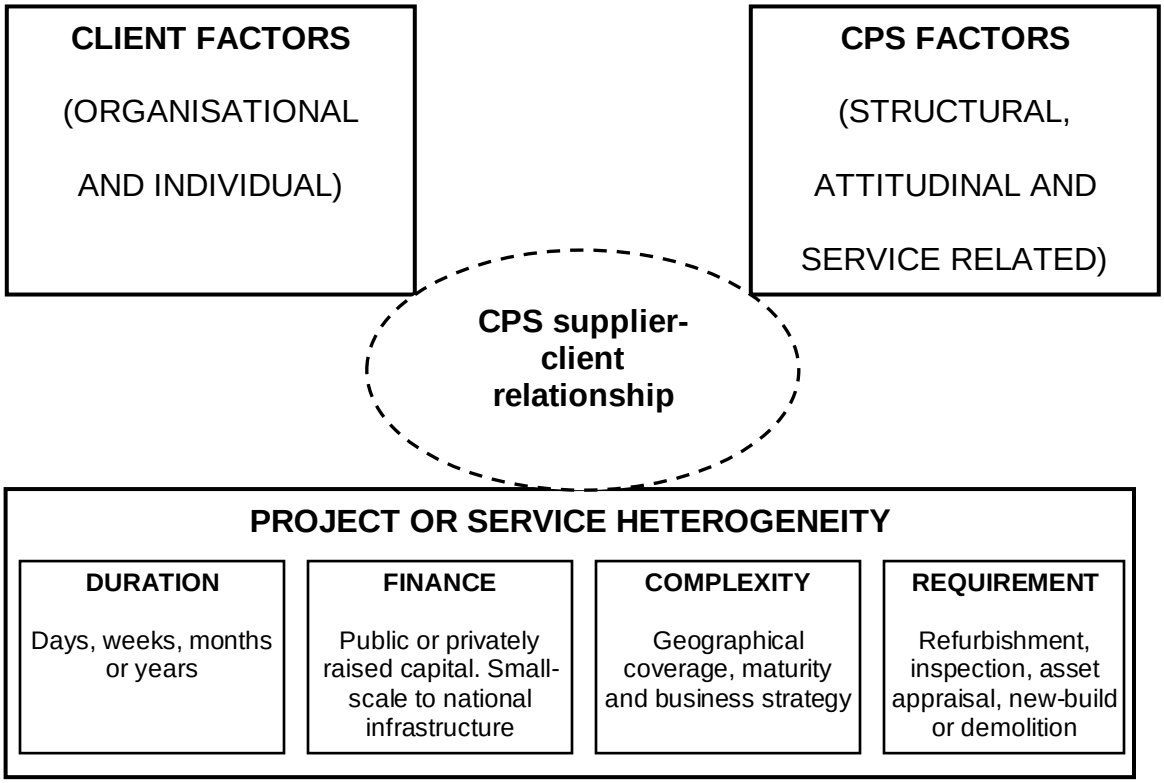


Figure 2-5. Potential impacts on CPS supplier and client relationships.

To restate the limitations detailed in Chapter 1, the objectives of this research do not extend to testing empirically a holistic model of all the factors that can influence CPS-client relationships, as summarised in Figure 2-5. The focus of this research is restricted to the service-related antecedents that CPS suppliers can influence during delivery. However, the wider range of factors that can influence CPS-client loyalty must be acknowledged when drawing conclusions from this research.

2.8. Chapter conclusion

Chapter 2 reviews the professional service literature, the main purpose of which was to identify theories that could help explain client loyalty in a CPS context. The findings of the literature analysis suggest that CPS suppliers deliver knowledge-intensive services with a focus on the core delivery outcomes for clients. In

addition, the scoping and delivery of CPS require a high degree of client interaction, which is likely to result in relational factors (such as likeability, trust and communication skills) particularly influencing client loyalty.

The high degree of knowledge intensity associated with the services delivered by CPS suppliers may result in them becoming embedded in a client's project or process. This may lead to clients perceiving that there are significant risks and costs associated with terminating the relationship, thereby acting as a relationship anchor. CPS suppliers in the UK operate in a free-market economy, subject to professional regulation. In common with other services delivered within UK markets, perceived value for money is therefore likely to be an order winner. Chapters 3 and 4 builds on the findings presented in this chapter, leading to the development of a conceptual model of CPS-client loyalty.

Based on the evidence reviewed, an argument is made that whilst CPS sub-professions deliver different services, there have similarities regarding their underpinning professional traits. There are likely to be commonalties between the things that clients want from different CPS sub-professions. These may include expertise, friendliness and communication skills. Together with the examples of other published studies in which CPS suppliers were studied collectively, this supports the approach of CPS suppliers being studied collectively in this research.

Chapter 3. The concept and nature of client loyalty

3.1. Introduction

In this chapter, the concept of client loyalty is defined and disentangled from other related phenomena. The operationalisation of loyalty is also considered which will inform the methodology adopted in this research.

3.2. The loyalty literature

The amount of literature relating to service loyalty has been described as "*vast*" (Mittal, 2016, p. 569). However, no articles were found that focus specifically on client loyalty in a CPS context. This necessitated using evidence and theories from other professional fields. The analysis was later extended to include wider business-to-business service literature that was deemed to offer insights. A summary of the source articles used in the detailed analysis of client loyalty is presented in Appendix B.

3.3. Client loyalty

3.3.1. The history of loyalty research

Harwood, Garry and Broderick (2008) highlighted the recent unfortunate association of the term 'loyalty' with points-based programmes in consumer retail markets. This should not detract from the compelling evidence that client loyalty leads to many benefits for CPS suppliers.

For suppliers, the importance of building strong relationships with their clients has been long known. Gronroos (1994, p. 18) cites an ancient proverb that states "*As a merchant you'd better have a friend in every town*." Despite this axiom, mid-20th - Century academic interest concentrated mainly on the acquisition of new clients, rather than the retention of existing ones. Early conceptualisations of client-

supplier dyads concentrated on the buying and selling aspects of economic transactions (Bagozzi, 1978). Research interest was fixed on purchasing behaviour. This is illustrated starkly by Tucker (1962, p. 32), who stated that "*No consideration should be given to what the subject thinks nor what goes in his central nervous system, his behaviour is the full extent of what brand loyalty is.*" Later research was influenced by psychology, sociology and anthropology. This began a focus on the motivations and attitudes that drive the exchange relationship (Arndt, 1979).

During the 1980s, academic interest in how suppliers could retain and benefit from their existing clients intensified. Berry (1983, p. 25) first used and defined the term 'relationship marketing' explicitly, defining it as "*attracting, maintaining and enhancing customer relationships*". The overall goal of this approach is to further develop already-strong client relationships and to convert indifferent clients into loyal ones (Parasuraman, Berry and Zeithaml, 1991; Lambe, Wittmann and Spekman 2001). According to Gummesson (1987, p. 14), "*the marketing that takes place during the interaction (between the service provider and the customer) is often the most important […] marketing that a service company does*". As a result, employees are called upon to not only deliver the service but also to develop the client relationship.

A relationship marketing approach is most appropriate in certain situations, particularly where there is a high level of customer interaction. Where there exists a degree of uncertainty or difficulty in evaluating the service, clients are focused on value rather than cost, and there is a higher degree of service customisation (Kirchmajer and Patterson, 2004; Harwood, Garry and Broderick, 2008). The analysis presented in Chapter 2 suggests that CPS supplier-client relationships meet these criteria.

Relationship marketing in the construction industry has attracted only a modest amount of academic attention (e.g. Davis, 2004; Davis, 2008; Smyth and Fitch, 2009). Smyth (2006, 2009) argued that a relationship marketing approach is even more appropriate for CPS compared to the wider construction industry, as they are more relational, and the outputs are more intangible and harder for clients to appraise. Clients are likely to seek closer and longer-lasting relationships with suppliers where the service is complex and strategically important to them (Hutt and Speh, 2007).

Client-supplier relationships in the construction industry have often been adversarial, with a reliance on contractual governance (Davis, 2004: Challender, Farrell and McDermott, 2019). However, there are limits to which contracts alone can facilitate mutually successful exchanges. Client-supplier relationships governed by the enforced power of one party over another will eventually lead to conflict, mistrust and resultant costs for both parties. Sheth and Parvatiyar (1995) noted that the academic focus has been mirrored by the evolution of many real-world markets where there has been a shift away from adversarial exchanges towards cooperative and interdependent business-to-business relationships.

A potential barrier to building long-term client relationships is the project-based nature of construction. Furthermore, clients have tended (and in many cases continue) to focus on the lowest price when procuring construction services. In response, suppliers may bid low and then adopt tactics to extract additional revenues from the client to make up the shortfall (Eriksson, Nilsson and Atkin, 2008). Thus, the construction industry has traditionally been characterised by arms-length relationships between clients and suppliers, both of which incur significant costs through defensive behaviours and the resultant contractual disputes (Black, Akintoye and Fitzgerald, 2000). The reports of Latham (HMSO, 1994) and Egan (1998) advise construction clients and suppliers alike to build

long-term relationships with mutually aligned objectives. Boyd and Chinyio (2006, p. x) maintain that "*Building is not just about building*!", which highlights the central role of good working relationships between the various parties involved in a construction project. A focus on developing long-term relationships leads to multiple beneficial outcomes for construction service suppliers, including the profitability associated with client retention (Davis, 2008). Relationships between clients and suppliers that are mutually committed to each other result in greater productivity and efficiency compared to those based on the power of one party over the other (Morgan and Hunt, 1994).

3.3.2. Defining client loyalty

Loyalty has multiple different (and occasionally conflicting) conceptualisations within the literature (Watson *et al.*, 2015). One of the most common of these is "*repatronage*" (e.g. Soderlund, 2006, p. 76), a term used to define repeat purchasing. Other terms applied to this aspect of loyalty include "*repeat patronage*" (Sarapaivanich and Patterson, 2015, p. 882), "*behavioural loyalty*" (Cater and Cater, 2010, p. 1322), "*retention*" (Trasorras, Weinstein and Abratt, 2009, p. 623) and "*purchase intentions*" (Rauyruen and Miller, 2007, p. 26). An inverted form of this concept has also been adopted in other loyalty studies; examples include "*defection intentions*" (Johnson, Barksdale and Boles, 2001, p. 125) and "*switching intentions*" (Mittal, 2016, p. 569). One of the most cited definitions of repatronage loyalty is that of Oliver (1999, p. 34), which described it as "*a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future*". Repatronage is one of the most important aspects of loyalty for construction suppliers, as it leads to lower costs and reliable revenues (Black, Akintoye and Fitzgerald, 2000).

Another term used in the literature is attitudinal loyalty (AL). This has been defined and operationalised by a wide range of concepts, which include a preference for a supplier, wishing to grow the relationship, a willingness to invest in the relationship, a willingness to pay a premium price, a resistance to a competitor's offerings (Narayandas, 2005), general disposition towards the supplier (Jayawardhena *et al.*, 2007) and advocacy (Rauyruen and Miller, 2007). Its conceptualisation in extant studies suggests that it is a hybrid of commitment and loyalty.

The willingness of a client to recommend a service provider to others and provide referrals also has commonly been used to indicate loyalty. Several terms have been used to represent it; these include "*word of mouth*" (WOM) (Arndt, 1967; Mazzarol, Sweeney and Soutar, 2007), "*attitudinal advocacy*" (Rauyruen and Miller, 2007, p. 23), "*advocacy*" (Susanta, Idrus and Nimran, 2013, p. 41), "*word of mouth communications*" (WOMC) (Anaza and Rutherford, 2014, p. 427) and "*positive word of mouth*" (PWOM) (Molinari, Abratt *et al.*, 2008, p. 363). Referrals and recommendations from current clients are crucial to the success of CPS suppliers. In business-to-business service markets, they play an important role in prospective clients' purchasing decisions (Roth, Money and Madden, 2004). Reichheld (2006, p. 28) contended that client advocacy is the single most important measure that supplier firms should focus on, as it reflects "*the emotional and the rational dimensions*" of the service relationship.

It should be noted that WOM has a valence that can be positive, neutral or negative. Mazzarol, Sweeney and Soutar (2007) stated that WOM is most likely to give extremely positive or extremely negative feedback. Negative feedback about a service provider from a dissatisfied client can be damaging, adversely impacting on the firm's reputation and likelihood of winning new business (Desatnick, 1987). PWOM is a beneficial manifestation of loyalty. Generally, PWOM is important to

business-to-business services as it is a key source of new business (Kim, 2014). It is deemed to be particularly important for CPS, given the weightier consequences of service outcomes and the reliance prospective clients often have on referrals from trusted, independent advocates.

Given that repatronage and PWOM are deemed to be so important to CPS suppliers, they were both included in the conceptualisation of client loyalty in this research. Based on how it has been defined and operationalised in in extant studies, AL was deemed to be very similar to commitment, and it was therefore excluded from the conceptualisation of loyalty used in this research. Multidimensional conceptualisations of loyalty are better predictors of actual firm performance than those that only capture one dimension (Keiningham *et al.*, 2007). Due to it capturing both the repatronage and PWOM aspects, the definition of client loyalty provided by Yeh, Wang and Yieh (2016, p. 247) has been adopted in this research: "*a favourable attitude […] that results in intentions to repurchase and recommend*". Figure 3-1 illustrates graphically how client loyalty is conceptualised in this research.

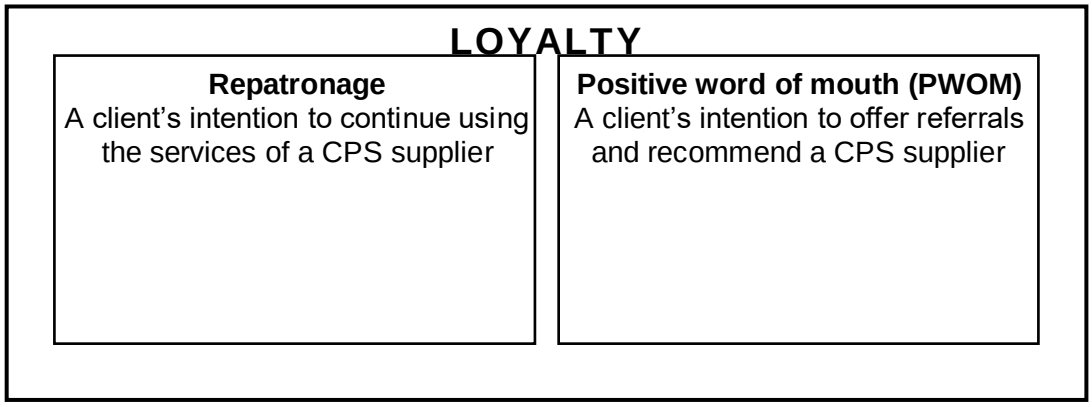


Figure 3-1. Conceptualisation of CPS-client loyalty in this research.

3.3.3. Does the loyalty of individual clients matter?

Whilst CPS practitioners were included in the qualitative exploration phase of the research, the unit of observation in the follow-up quantitative phase was the individual client representative. The aim of this section is to demonstrate the impact that individual clients' loyalty has on CPS retention and to justify them being chosen as the focus of study.

As discussed in Chapter 2, construction clients in business-to-business situations are often organisations or groups rather than individuals (Boyd and Chinyio, 2006). Employees contributing to the delivery of the client role may be employed directly by the client or by outsourced consultants. Larger public and private sector clients often have a buying centre with several internal stakeholders involved in the purchase decision. In some instances, these individuals have conflicting goals. This makes it even more difficult for CPS suppliers to understand the needs of the client organisation and deliver solutions to meet them. Decision-making about supply chains on a construction project is often within a wider team assembled by the client (Kamara, Anumba and Evbuomwan, 2002). These issues raise questions about the degree of influence that the people whom CPS suppliers deal with have on procurement decisions.

There is evidence to suggest that individuals for whom professional services are delivered play an important role in decision-making regarding supplier selection and retention. Professional services differ from those of a non-professional nature due to their "*opaque quality*" (Von Nordenflycht, 2010, p. 61). Thus, their complexity is such that specialists within the client organisation are more able to appraise and manage professional service appointments than procurement professionals. Even if they are not the sole decision-makers, supplier-facing individuals at least have influence over deciding whether a professional service supplier is appointed or retained (Laing and Lian, 2005). In summary, as Lian and

Laing (2007, p. 710) elaborated, "*It is not procurement professionals who are dominant in the purchasing process but rather service professionals*."

Whilst certain structural and organisational barriers may prevent clients from expressing loyalty via repurchase and retention, there are arguably fewer restrictions preventing them from recommending a CPS supplier. PWOM from clients is highly beneficial for CPS suppliers. Reichheld (2003) argued that net promotion (client advocacy) is the single biggest indicator of a firm's future success. However, this has since been questioned by others. Schneider *et al.* (2008) failed to find enough evidence to conclude that there is a strong link between a supplier's financial performance and the advocacy levels of their client base. Some have reasoned that it is wrong to focus on PWOM alone and that this approach is applicable to the quote attributed to the writer H.L. Mencken: "*To every complex problem there is a solution which is simple, elegant and wrong*!" (Kristensen and Eskildsen, 2011, p. 974). Zaki *et al.* (2016) stated that it is a fallacy to assume that a client's attitudinal advocacy towards a supplier is associated with their future business success.

Whilst these concerns warrant a degree of caution in extoling the value of PWOM, there is sufficient evidence to demonstrate its importance and for its inclusion within the conceptualisation of CPS-client loyalty. As services become more complex, suppliers increasingly rely on client advocacy (Lawrence *et al.,* 2019). WOM is seen as valuable source of information from trusted, independent sources about a professional service provider from the perspective of experience (Harvey and Mitchell, 2015). PWOM is a vital source of new business for many professional firms, particularly smaller ones with fewer marketing resources. No CPS or wider professional service studies could be found that link PWOM intentions empirically with actual referrals and recommendations. However, evidence from other industries suggests that the recommendation intention does

indeed provide insight into clients' future advocacy behaviour (Keiningham *et al.,* 2007).

The evidence suggests that the attitudes and motivations of individual client representatives are likely to have a high degree of influence on a client organisation's decisions to retain and advocate for CPS suppliers. Therefore, it is deemed appropriate to select them as the target of study. This assumption is examined empirically during the qualitative phase research detailed in Chapter 6.

3.3.4. Prior operationalisation of client loyalty

This next section presents an analysis of how client loyalty has been operationalised in extant studies. This has afforded an opportunity to identify and minimise the potential pitfalls when measuring loyalty during the quantitative phase of this research. Loyalty can be considered from the perspective of the client, the service provider or both. Loyalty on both sides of the client-supplier dyad may be interrelated and bidirectional (Bardauskaite, 2014). However, for expediency purposes, this study focuses only on the loyalty of the client towards the CPS supplier.

Due to the absence of articles investigating loyalty in a CPS context, reliance was placed on evidence from the business-to-business professional service literature. The review was later widened even more to include several frequently cited and highly influential loyalty-related articles from the broader business-to-business services sector. Whilst articles adopting a qualitative methodology were included in the wider review of client loyalty (out of necessity), only purely quantitative or mixed methods research articles were used in the analysis for the loyalty-construct design undertaken in this chapter.

There were several other criteria for inclusion: the article must operationalise loyalty in a business-to-business services context (with a preference for

professional services), either explicitly or via a related concept such as retention; and the survey questionnaire (where used) must be published either in the article itself or via a reference to an obtainable source. The full analysis of findings is presented in Appendix B.

Figure 3-2 demonstrates the myriad ways in which the loyalty construct has been operationalised in the professional and wider business-to-business service literature. These include repatronage (e.g. Gounaris, 2005; Sarapaivanich and Patterson, 2015; Russo *et al.*, 2016), PWOM (e.g. Chenet, Dagger and O'Sullivan, 2010), AL (Chenet, Dagger and O'Sullivan, 2010) and various combinations of each.

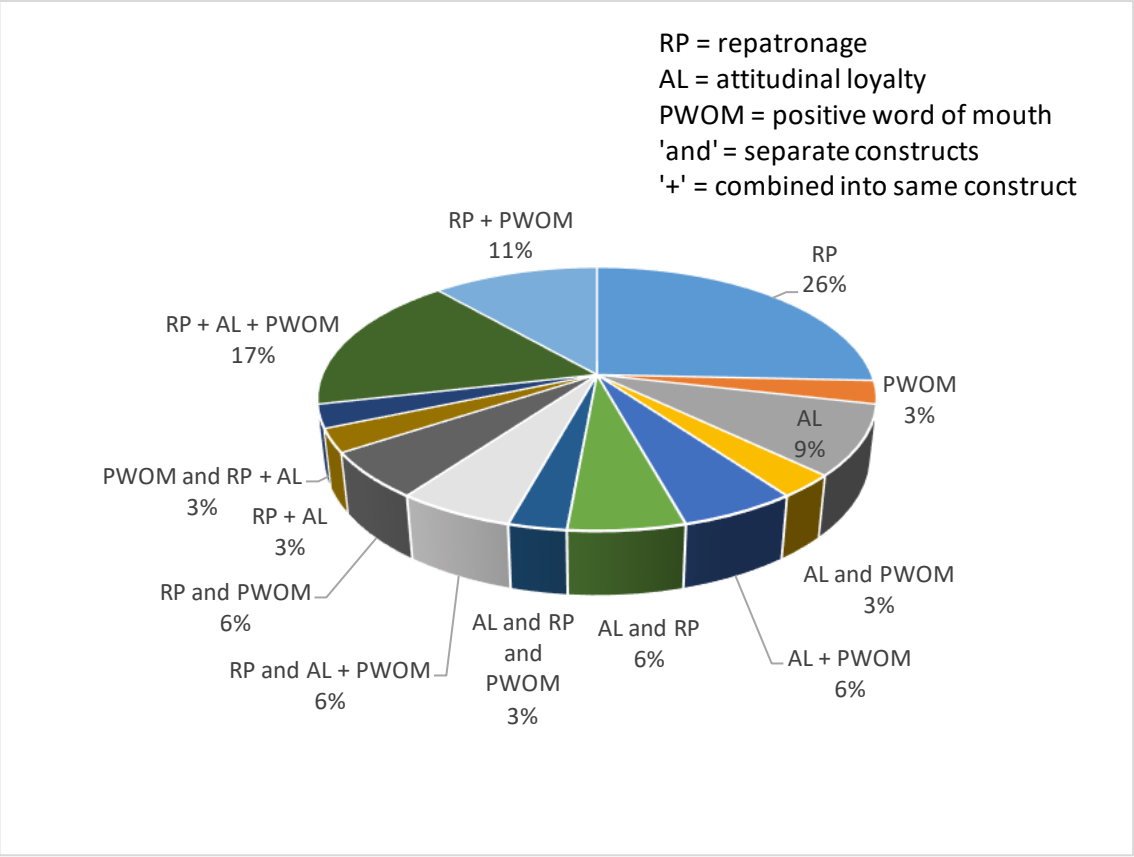


Figure 3-2. Loyalty operationalisation in the articles reviewed.

For clarity purposes, Table 3-1 shows the findings of the loyalty-related literature analysis for a smaller number of categories. In nearly half of the articles (47%),

loyalty was operationalised by the use of a fused construct containing a combination of repatronage, AL and/or PWOM items (e.g. Zeithaml, Berry and Parasuraman, 1996; Caceres and Paparoidamis, 2007; Cater and Cater, 2009; Cater and Zabkar, 2009).

Table 3-1. Loyalty operationalisation in the articles reviewed

Loyalty operationalisation	Number of articles	Percentage of articles
Studies that operationalised loyalty using only repatronage (RP)	9	26%
Studies that operationalised loyalty using only attitudinal loyalty (AL)	3	9%
Studies that operationalised loyalty using only positive word of mouth (PWOM)	1	3%
Studies that operationalise loyalty using a combination of AL, RP and/or PWOM as separate constructs	6	17%
Studies in which a combination of either RP, PWOM and/or AL are fused into the same construct	16	47%

An argument exists for conceptualising repatronage and PWOM as separate desirable outcomes. Soderlund (2006, p. 76) posits that "*The lumping together of such facets as repatronage and word-of-mouth is likely to conceal significant aspects of loyalty per se and its relation to other variables*." Watson *et al.* (2015) stated that PWOM is socially complex, and it is influenced by self-image, consideration for others and serendipitous encounters. In summary, they argued that PWOM and repatronage are conceptually distinct. They give an apt consumer-setting example of a customer being loyal to a brand of condom but being unlikely to recommend it to others. Although perhaps not having such a stark effect in a business setting, a client may be less likely to recommend for reasons of self-interest. For example, they may perceive the capacity of their CPS supplier to be already stretched due to workloads. In such a situation, they may be

reluctant to recommend the supplier to a peer to avoid risking a degradation of the supplier's performance on their own projects.

Relatively few articles (6%) operationalised loyalty via repatronage and PWOM in the form of separate constructs. Those that did include that of Lam *et al. (*2004), who separated and measured the impact of antecedents on PWOM and repatronage as discrete outcomes. Rauyruen and Miller (2007, p. 26) also separated the two conceptually into what they referred to as "*purchase intentions*" (repatronage) and "*attitudinal loyalty*" (a construct consisting of nearly all PWOM-based items).

As well as the empirical argument for separating repatronage from PWOM, there is a practical reason for doing so, as they fulfil different managerial objectives: repatronage is the intention of the client to repurchase the services of the CPS provider, whereas PWOM leads to the benefit of attracting new customers. However, both are arguably important to CPS suppliers, but for different reasons.

The counter-argument is that many articles have demonstrated empirically that there are valid and unidimensional loyalty constructs consisting of both repatronage and PWOM items (e.g. Zeithaml, Berry and Parasuraman, 1996; Caceres and Paparoidamis, 2007; Cater and Cater, 2009; Cater and Zabkar, 2009). However, based on the aforementioned arguments for separating them, repatronage and PWOM were initially conceptualised as distinct constructs, representing desirable-but-different aspects of client loyalty. This was examined empirically during the quantitative data analysis.

Differences in what is referred to as "*temporal orientation*" (Watson *et al.*, 2015, p. 792) have also been noted regarding the survey items used to measure loyalty. Some scholars used measures that were prospective (forward-looking), some used measures that were retrospective (backward-looking), and others refer to the *status quo* or current position. By way of example, Cahill *et al.* (2010, p. 269)

operationalise loyalty via PWOM retrospectively as “have recommended”, whereas Cater and Cater (2010, p. 1161) used a similar measure, but in the present tense of “*I recommend [the supplier*]”. Furthermore, Wu Chen and Chen (2015, p. 339) use the prospective term “*would definitely recommend.*” Watson *et al. (*2015) held such inconsistencies as problematic with respect to the inferences one can make when comparing the findings of these studies. Figure 3-3 demonstrates the temporal orientation of the measures used in the articles. Nearly half (44%) of the studies adopted temporally inconsistent loyalty measures in the same construct. These findings and the arguments for avoiding temporal-orientation inconsistency were of practical assistance during the design of the survey used in this research, as detailed in Chapter 5.

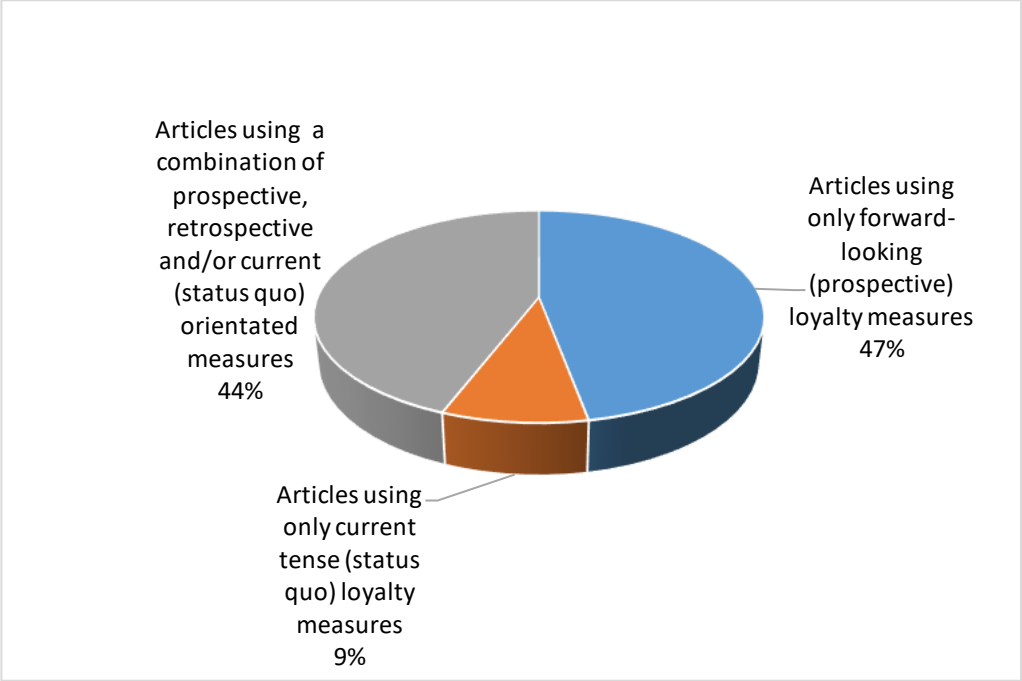


Figure 3-3. Temporal orientation of the survey items in loyalty studies.

3.3.5. The relationship between loyalty intentions and actual loyalty

A client’s attitude being an antecedent to client loyalty can be explained using the theory of reasoned action (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). This asserts that attitudes and subjective norms are the antecedents of performed

behaviour. Both the client's attitude towards the service in question and their general feelings about the act of repatronage in the CPS setting must be accounted for. It is also important to consider the subjective norms that influence the client's intentions; these include social influences such as peers' and colleagues' expectations, which influence the client's actions. The theory of reasoned action was subsequently refined to account for certain criticisms that behavioural intentions do not always lead to actual behaviour (e.g. Sarver, 1983). This led to the theory of planned behaviour, which added the perceived degree of control as a behaviour modifier (Ajzen, 1991). Where subjects feel their control of the outcome is constrained by external factors, this will negatively influence the likelihood of attitude translating into behaviour. However, where individuals feel in complete control over the outcome, intentions alone should be enough to predict behaviour, and perceptions of extraneous control will make no substantial contribution. The refinement of the theory of reasoned action by the theory of planned behaviour has been demonstrated empirically to improve the model with respect to the prediction of actual behavioural outcomes (e.g. Madden, Ellen and Ajzen, 1992).

In applying this theory to a CPS-supplier context, it is posited that a client's attitude is influenced by service-related antecedents, which will influence their intentions and future behaviour in turn. Based on the theory of planned behaviour, a client's attitude may also be influenced by subjective norms. For example, in a CPS-supplier business-to-business context, the expectations of the client's employer for achieving project success are anticipated to influence their attitudes and decision-making. Behavioural intentions are also influenced by a client's perceived degree of behavioural control. This is theorised to be relatively high in situations where the client feels they have autonomy in or influence over the decision-making process. Lastly, in a CPS supplier-client relationship, the theory of planned behaviour

conjectures that behaviour intentions are the strongest predictor of actual behaviour, which in this context is loyalty manifested as patronage and PWOM. The posited link connecting client attitudes and norms with behavioural intentions and actual behaviour is demonstrated in Figure 3-4.

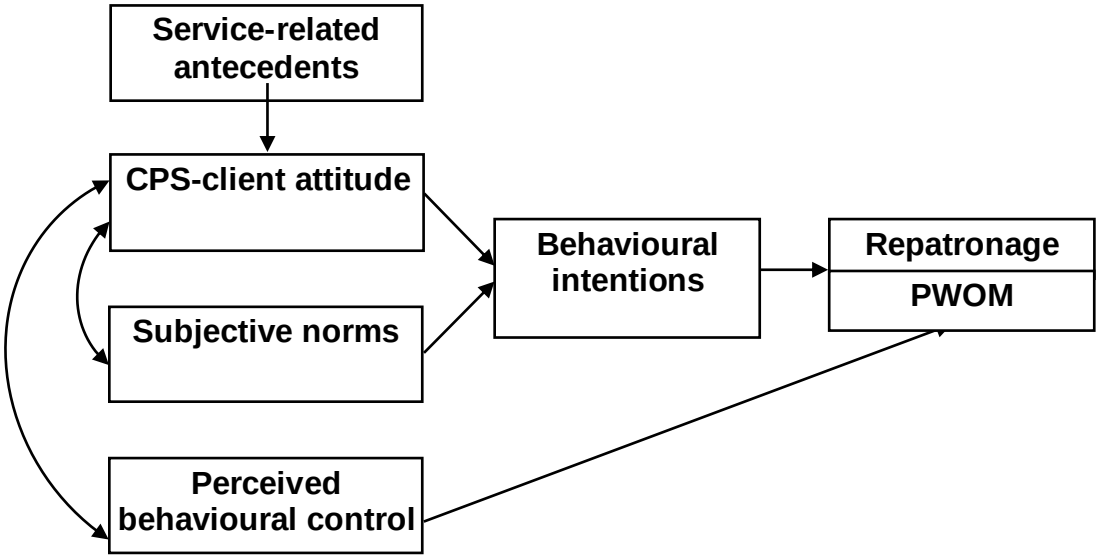


Figure 3-4. Model of CPS-client behavioural intentions leading to behaviour.

An assumption underpinning this research is that the theory of planned behaviour holds in a CPS context. Thus, attitude influences actual loyalty behaviour. Deterministic (intention-related) loyalty measures include the intention and willingness to rebuy and/or offer PWOM. Such indicators (either in isolation or in combination) have been used to indicate loyalty in several frequently cited studies (e.g. Zeithaml, Berry and Parasuraman, 1996; Eriksson and Vaghult, 2000; Bolton, Smith and Wagner, 2003; Lam *et al.*, 2004; Rauyruen and Miller, 2007; Trasorras, Weinstein and Abratt, 2009; Cahill *et al.*, 2010; Sarapaivanich and Patterson, 2015). On this basis, the client's intentions have been used to operationalise loyalty in this research.

It has been debated that more empirical evidence is needed to support the assumption that deterministic loyalty is truly predictive of actual purchase behaviour and advocacy (Naumann *et al.,* 2010; Williams *et al.,* 2011). Therefore, an alternative approach was considered, which was to focus on stochastic loyalty. This involves studying loyalty post-purchase, and it includes measures such as share of purchase and frequency of purchase considered retrospectively (Ehrenberg, 2000). The argument against such an approach is that past behaviour is an inaccurate means of predicting it (Aydin and Ozer, 2005). Furthermore, evidence from other business sectors suggests that deterministic 'likelihood to continue' and 'willingness to recommend' indicators do indeed translate into actual loyalty behaviour (e.g. Dick and Basu, 1994; Reichheld, 2003). The longitudinal study of Williams *et al. (*2011) identified a strong positive relationship between clients expressing an intention to terminate a business-to-business supply relationship and those who did. This suggests that client intentions do indeed translate into actual behaviour. Furthermore, there are practical and ethical difficulties in obtaining supplier share and spend information from CPS clients, which would be required to investigate loyalty retrospectively. Therefore, for expediency purposes, loyalty has been conceptualised and operationalised deterministically in this research.

Chapter 4. Conceptual model of client loyalty

4.1. Introduction.

Chapter 4 presents the proposed antecedents of CPS client loyalty based on the literature review. This was informed by the analysis of CPS-trait theories reviewed in Chapter 2. This section concentrates specifically on those that may be most associated with client loyalty in a CPS context. The arguments for the inclusion (and, in some cases, exclusion) of antecedents from the conceptual model of CPS-client loyalty are presented. The service-related antecedents were selected based on their perceived efficacy in predicting client loyalty in a CPS context. The conceptual CPS-client-loyalty model is presented at the end of the chapter.

4.2. Relationship quality

Establishing a good working relationship is conducive to identifying and meeting a client's needs, thereby increasing their willingness to work with a service provider in the future (Casidy and Nyadzayo, 2017). Several scholars have conceptualised relational loyalty antecedents as a higher-order composite construct known as 'relationship quality'. Although there has been some debate about the nature of relationship quality, it is defined broadly as "*an overall evaluation of the relationship between buyer and seller*" (Woo and Ennew, 2004, p. 1256). There is no academic consensus regarding the individual components of which relationship quality is comprised (Rauyruen and Miller, 2007; Jiang *et al.*, 2016). It has been conceptualised within business-to-business service contexts in several different ways. Examples include service quality, commitment, trust and satisfaction (Rauyruen and Miller, 2007); adaptation, knowledge transfer, trust and cooperation (Cater and Cater, 2010); and trust, competence and professionalism (Casidy and

Nyadzayo, 2017). The key components of relationship quality are likely to be industry- or even market-specific (Woo and Ennew, 2004; Cater and Cater, 2010). Izogo (2016, p. 127) demonstrated empirically that a disaggregated model of relationship quality is a better predictor of client loyalty than a composite model of the construct, due to the differential impact of each constituent. Whilst these results were obtained from the banking sector, the author argued that the results are "*largely generalisable*" to other sectors. The validity of this claim is deemed to require empirical scrutiny. However, given that the aim of this research is to identify the key service-related loyalty antecedents of CPS-client loyalty, they are conceptualised in this research as discrete themes and constructs as opposed to a single aggregated antecedent. In this way, the differential impact of each on client loyalty may be examined.

4.3. Commitment

The commitment between parties in the construction industry has been the subject of prior empirical enquiry. However, such research has centred on commitment in an inter-organisational context (Leung and Chan, 2007; Mohyin, Dainty and Carrillo, 2009; Mohyin, Dainty and Carrillo, 2012) or between project-team actors (Leung *et al*., 2004).

Commitment has been positioned as the central explanatory construct of client loyalty in business-to-business services (e.g. Morgan and Hunt, 1994; Rauyruen and Miller, 2007; Cater and Zabkar, 2009; Cater and Cater, 2010). However, no extant research has examined how client commitment may influence loyalty to CPS suppliers. Commitment is the single most important driver of positive client intentions towards their suppliers (Morgan and Hunt, 1994; Fullerton, 2014). Therefore, it is afforded a central position in the conceptual model of CPS-client loyalty in this research.

When considering what commitment means, the first impression may be of positive or even affectionate feelings. The Oxford Dictionary defines it as "*the state or quality of being dedicated to a cause, activity,* etc." However, it also gives an alternative definition of "*an engagement or obligation that restricts freedom of action*" (Oxford University Press, 2018). By way of example, a client may be committed to using the services of a CPS supplier due to an emotional attachment to an individual or their employing firm. Conversely, the client may be committed without any feelings of affection by virtue of constraint or dependence. Either or both may be influential to situation-specific degrees. A client may feel personal affection towards a CPS supplier, but that may not be enough to preserve the relationship. For example, clients acting on behalf of public sector organisations are constrained by the requirement to demonstrate value for the public purse when procuring (and reprocuring) services. Where services exceed a certain threshold value, they are obliged to undertake a procurement exercise selecting the *"most economically advantageous tender*" (Gov.uk, 2018), or to appoint from a framework suppliers that have demonstrated the best value via a similar process. Whilst less constrained by procurement regulation, private sector clients are required to fulfil corporate objectives by seeking competitive advantage and profitability through their supply chains (Rameezdeen and Jayasena, 2013).

The conceptualisation of commitment originates from the literature associated with human-motivation theory, which relates to the satisfaction of needs (Maslow, 1943). In a business-to-business context, commitment is defined as "an implicit or explicit pledge of relational continuity between exchange partners" (Dwyer, Schurr and Oh, 1987, p. 19) and "an enduring desire to maintain a valued relationship" (Moorman, Zaltman and Deshpande, 1992, p. 316). Commitment is widely viewed as the most important and most differentiating factor in successful client-service-provider relationships (Harwood, Garry and Broderick, 2008). Without

commitment, loyalty may be spurious, situational and short-lived (Rauyruen and Miller, 2007).

Client commitment has been conceptualised as a unidimensional construct (Dwyer, Schurr and Oh, 1987; Moorman, Zaltman and Deshpande, 1992; Morgan and Hunt, 1994; Caceres and Paparoidamis, 2007). However, Allen and Meyer (1990) developed a three-dimensional form of commitment, originally in an intra-organisational setting. Such a model reflects the different psychological states that bind an individual to an organisation (Bloemer and Odekerken-Schroder, 2007). The three commitment dimensions are continuance, often termed "*calculative*" (attachment due to instrumental reasons); "*affective*" (attachment due to liking and identification); and "*normative*" (attachment due to a sense of obligation) (Sharma, Young, and Wilkinson, 2015, p. 46). Succinct descriptions of calculative, normative, and affective commitment can be expressed as "*need to*", "*ought to*" and "*want to*" motivations, respectively (Meyer and Allen, 1991, p. 3). Commitment in a multidimensional form was subsequently applied to business-to-business client-supplier contexts (Sharma, Young and Wilkinson 2006; Cater and Cater, 2009; Cater and Zabkar, 2009; Cater and Cater, 2010; Sharma, Young, and Wilkinson, 2015). Bloemer and Odekerken-Schroder (2007) explained that the multidimensional model of commitment leads to better understanding of clients' motivations for continuing a relationship. Using a unidimensional form of commitment would not support an investigation of the underlying reasons for client loyalty. Furthermore, doing so may mask different or even opposing motivations (Geyskens *et al.*, 1996; Gounaris, 2005). Therefore, a multidimensional form of commitment was adapted for this research.

There appears to be a consensus regarding the nature of affective commitment. Allen and Meyer (1990, p. 2) conceptualised it originally in an employee-employer context as an individual's "*emotional attachment to an organisation*". Since that

time, it has also been operationalised in several different ways, including feelings of liking and identification (Geyskens, *et al.*, 1996); shared values, belongingness and similarity (Bendapudi and Berry, 1997); and "*a desire to develop and strengthen a relationship with another person or group because of familiarity, friendship, and personal confidence built through interpersonal interaction over time*" (Sharma, Young and Wilkinson 2006, p. 65). Regarding professional services, Von Nordenflycht, Malhotra and Morris (2015, p. 139) argued that "*part of what clients purchase is the process of interaction*", which is a noteworthy intangible affective component. To a limited extent, affective commitment can even serve to prevent a supplier-client relationship breaking up during periods of poor service (Young and Denize, 1995).

Part of establishing a connection and rapport is emotional intelligence, which is defined as "*the ability to recognise, interpret and manage emotion during interpersonal interactions*" (Pryke and Smyth 2006, p. 78). The ability to connect personally and establish good relationships is associated with successful outcomes on construction projects (Pryke and Smyth, 2006). The emotional intelligence of construction professionals is an increasingly important attribute in modern markets (RICS, 2019b). In the context of professional services, Clark (2015, p. 146) outlined that "*Great firms are built on great client relationships.*" The relationships that professionals have with their clients are inimitable and hold a source of sustained competitive advantage (Schertzer, Schertzer and Dwyer, 2013). Sutherland (2015, p. 148) summed it up as "*professional firms are about people.*"

CPS firms are heavily reliant on the individual and collective input of their workforce for both ensuring service quality and building relationships with their clients (Mohyin, Dainty and Carrillo, 2009). The very nature of CPS, which are considered "*medium-high contact*", dictates that the client-supplier relationship

constitutes the heart of the client's service-experience evaluation (Sarapaivanich and Patterson, 2015, p. 883). Furthermore, "*people relationships*" between employees with clients and the wider project team have been found to be a key success factor for construction businesses (Mbugua *et al.*, 1999, p. 260). However, other research suggests that the importance of such sentiments should not be exaggerated and cannot compensate for inadequate performance in business-to-business contexts (Wathne, Biong and Heide, 2001).

Whilst there is strong evidence for the positive impact of affective commitment on loyalty, clients in business-to-business markets are also motivated by risk-reduction and value-seeking objectives (Huang, Leu and Farn, 2008; Cater and Cater, 2010; Russo *et al.*, 2016). This aspect was originally termed "*continuance commitment*" by Allen and Meyer (1990, p. 1), and it has been associated with the costs and risks of terminating a relationship, as well as the scarcity of viable alternatives. However, it is mostly referred to as *"calculative commitment*", reflecting its rational motivation base. In a professional service context, calculative commitment has been conceptualised as arising from constraints such as a lack of suitable alternative suppliers or high switching costs (Cater and Zabkar, 2009). Bendapudi and Berry (1997, p.1 7) used the term "*constraint-based relationship maintenance*" to define this type of relationship anchor. As well as the perceived costs and risks of terminating a relationship, calculative commitment is associated with dependence on a supplier (Anderson and Narus, 1990; Lambe, Wittmann and Spekman, 2001).

The theory of transaction cost economics (TCE) can be used to help explain calculative commitment in a CPS supplier-client context. Due to the complexity of the service delivered, it may be necessary for a client to invest significant time and effort in a relationship with a CPS supplier to achieve their required project outcomes. This has been termed "*specific asset investment*" (Wu *et al.,* 2015,

p.223). The term "*asset*" applies not only to capital and physical assets such as equipment and buildings but also to the knowledge embedded in human capital. The alternative term of "*relationship-specific investment*" has been used by others, (e.g. Palmatier, Scheer and Steenkamp 2007, p. 175), in the context of service relationships. Such investments are particular to a client-supplier dyad and cannot be reutilised when in a new relationship with a replacement supplier. Due to switching costs, this increases the client's desire to maintain the relationship (Anderson and Weitz, 1992; Gilliland and Bello, 2002). In the context of this research, an example would be a situation where a client is disinclined to lose a CPS supplier from their supply chain when that supplier has estate- or project-specific knowledge that would be difficult for a competitor to emulate.

The normative aspect of commitment is driven by feelings of obligation (Meyer and Allen, 1991). In a business-to-business context, normative commitment is most associated with a client's perceived moral obligation towards a supplier to remain in the relationship (Kumar, Hibbard and Stern, 1994). Whilst many business-to-business service studies consider commitment as a two-dimensional construct containing affective and calculative elements (e.g. Gounaris, 2005; Rauyruen and Miller, 2007; Chang *et al.*, 2012), fewer also include normative commitment within their conceptual models. Kelly (2004) argued that the three-component commitment model (comprising affective, calculative and normative elements) is empirically sound. Whilst affective and normative commitment are highly correlated, he found sufficient discriminant validity is demonstrated to warrant separate constructs. Fullerton (2014) suggested that, in common with affective commitment, normative commitment can buy suppliers time during periods of poor service. However, given that many clients in business-to-business markets may be propelled by rational drivers rather than sentiment, there is less compelling evidence of its influence in the context of this study. Nevertheless, it was included

as a candidate service-related antecedent to allow an empirical examination of its influence on CPS-client loyalty.

Expanding on the multidimensional conceptualisation of commitment, Sharma, Young, and Wilkinson (2006, p. 69) proposed that calculative commitment can have separate negative ("*locked-in*") and positive ("*value-based*") dimensions. Whilst locked-in commitment is consistent with the constraint-based nature of calculative commitment, value-based commitment arises from the expectation of gain arising from the relationship. Thus, value-based commitment in a business relationship is based on a cost-benefit determination that is associated with a client seeking to deliver value-seeking corporate objectives. Keiningham *et al.* (2015) reasoned that the three-dimensional model of commitment (affective, calculative and normative) developed by Meyer and Allen (1991) is inadequate for client-supplier contexts, as it was developed in an inter-organisational setting. For this reason, the split 'locked-in' and 'value-based' conceptualisation of calculative commitment has been adopted in this research as it is deemed more appropriate to CPS supplier-client relationships, allowing the exploration of both constraint-based and value-seeking motivations.

Creating and communicating value is a critical element of PSFs' business strategies (Trasorras, Weinstein and Abratt, 2009). Value for money is identified in the Latham Report as a key client requirement for which construction suppliers should improve on their delivery (HMSO, 1994). Value is co-created where the client is an active participant and involved in scoping the service. Regardless of the duration of a service relationship, its continuance is influenced by the extent of value co-creation (Vargo and Lusch, 2004). CPS provision often involves a significant amount of client interaction in scoping the service and delivering their specific needs. Co-creation during service delivery leads to client-perceived value, and it is an important source of competitive advantage for firms.

Value is determined by clients and is very subjective. Bardauskaite (2014, p. 41) defined it as "*the benefits of an exchange relationship weighted against the costs*". Value is what clients get compared to what they give in terms of time and investment. Clients stay loyal to a supplier when the perceived value of its service offerings is greater than that of its competitors. In the context of professional services, value is intrinsic to the service delivered, which is augmented via the client co-creation process and emerges over time through a series of interactions (Breidbach, Smith and Callagher, 2013). Molinari, Abratt and Dion (2008) operationalised value as a comparison of service level versus price. Due to the extensive interaction involved in the delivery of professional services, clients view the relationships they have with their service providers as themselves having intrinsic value (Howden and Pressey, 2008).

Table 4-1 summarises the definitions, example sources and synonyms of the four commitment dimensions. This summary is necessary as a result of the variability in how commitment has been defined and conceptualised within the literature. The conceptual model of commitment in this research consists of four dimensions: locked-in, affective, value-based and normative commitment. This more nuanced approach is intended to achieve better understanding of the different motivations impacting on client loyalty. There are no other known studies that have conceptualised commitment in this manner in a CPS context.

Table 4-1. Definitions of the different forms of commitment

Dimension	Definition	Synonyms
Commitment (unidimensional)	"*An enduring desire to maintain a valued relationship*" (Moorman, Zaltman and Deshpande, 1992, p.316).	"*Loyalty commitment*" (Gilliland and Bello, 2002), which combines affective and normative aspects.
Affective commitment	Commitment due to "*emotional attachment and identification*" (Meyer and Allen, 1991, p.67) as well as "*familiarity [and] friendship*" (Sharma, Wilson and Young, 2006, p.65).	None identified. The term "*affective commitment*" was used consistently in context within the original Allen and Meyer (1990)[1] conceptualisation in the reviewed literature.
Locked-in commitment	A situation where "*the costs and penalties associated with switching partners are viewed as prohibitive*" (Sharma, Young and Wilkinson, 2006, p.69).	Multiple synonyms, including "*continuance commitment*" (Allen and Meyer, 1990[2]; Fullerton, 2003[3]), "*calculative commitment*" (Cater and Cater, 2009; Cater and Zabkar, 2009), "*negative calculative commitment*" (Cater and Cater, 2010), "*forced commitment*" (Keiningham *et al.*, 2015[4]) and "*instrumental commitment*" (Kelly, 2004).
Value-based commitment	"*The rational calculation of gain from continuing in a relationship, including the value arising from the various types of direct and indirect functions that business relationships can provide*" (Sharma, Young and Wilkinson, 2016, p.70).	"*Positive calculative commitment*" (Cater and Cater, 2010) and "*economic commitment*" (Keiningham *et al.*, 2015).
Normative commitment	"*Attachment due to felt obligations*" (Cater and Cater, 2009, p.786).	"*Obligation commitment*" (Sharma, Young and Wilkinson, 2006).

Inertia has also been included rather less frequently in the conceptualisation of commitment. An example includes the concept of habitual commitment developed by Keiningham *et al. (*2015). Whilst inertia due to habit or apathy can affect client behaviour (Naumann *et al.*, 2010), others consider it less influential in business-to-business services compared to consumer markets (Ramaseshan, Rabbanee and Tan Hsin Hui, 2013). Hence, on the basis that client inertia is outside the control of

[1]Inter-organisational study.
[2]Inter-organisational study.
[3]Mixed industry study.
[4]Mixed industry study.

CPS providers, it was excluded from the conceptualisation of commitment in this research.

Fullerton (2003, p. 333) maintained that the assumption regarding commitment that "*more is better*" is overly simplistic, as the impact of its different aspects on loyalty may not be of equal magnitude or even in the same direction. Similarly, Keiningham *et al. (*2015) argued that emphasis should be placed on understanding how to allocate resources so as to optimise the commitment mix to enhance loyalty. The commitment model used in this research has been designed to investigate the differential effects of each of its various dimensions on client loyalty. Figure 4-1 demonstrates the different conceptualised dimensions of CPS-client commitment.

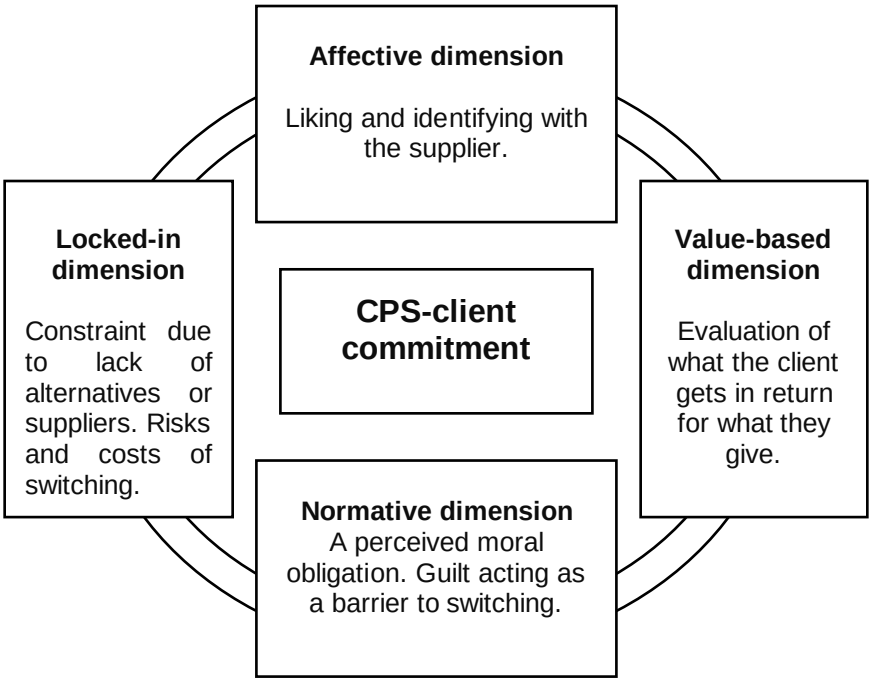


Figure 4-1. Conceptual model of CPS-client commitment.

4.4. Disentangling commitment from loyalty

It is important to distinguish commitment from loyalty, especially as scholars are not unanimous on the differences between them. This research conceptualises commitment as "*a psychological state reflecting a desire for relationship continuity*" (Sharma, Young and Wilkinson, 2006, p. 65) that leads to loyalty, which is defined as "*a favourable attitude that results in intentions to repurchase and recommend*" (Yeh, Wang and Yieh, 2016, p. 247).

Commitment conceptualised as a unidimensional construct has been positively associated with repatronage in business-to-business services (e.g. Morgan and Hunt, 1994; Caceres and Paparoidamis, 2007). However, this research seeks to study the relationship between commitment conceptualised in a four-dimensional form and client loyalty. to explore the differential impact of its different facets.

There is strong evidence for the association between affective commitment and loyalty. Affective commitment has been positively associated with repatronage in wider professional services (Cater and Cater, 2010), and a combination of repatronage and PWOM (Cater and Cater, 2009; Cater and Zabkar, 2009). There is also evidence for the link between affective commitment with a loyalty construct composed of repatronage and PWOM in wider business-to-business markets (e.g. Caseres and Paparoidamis, 2007; Cater and Cater, 2010). Affective commitment has been positively associated with PWOM (Chenet, Dagger and O'Sullivan, 2010).

There is mixed evidence for the positive influence of calculative commitment on client loyalty. This may be explained partly by the multitude of different ways in which it has been conceptualised, making inter-study comparisons more difficult. Calculative commitment has been positively associated with loyalty in property-related services (Levy and Lee, 2009) and wider business-to-business services (Rutherford *et al.*, 2008; Cater and Cater, 2010). However, other research has

shown no such relationship, either in professional services (Cater and Zabkar, 2009) or wider business-to-business services (Gounaris, 2005; Rauyruen and Miller, 2007). The degree to which clients feel constrained within the relationship is likely to be highly situational and is merits study in the context of CPS provision.

Feelings of attachment and identification (affective commitment) are very different from feelings of dependence and constraint (locked-in commitment) in terms of their differential impacts on loyalty intentions. Affective commitment exerts a consistently stronger positive effect on repatronage than calculative commitment (e.g. Wetzels, de Ruyter and van Birgelen, 1998; Fullerton, 2003). Calculative commitment was operationalised in a negative, constraint-based manner in both studies. Clients feeling constrained or trapped are unlikely to give PWOM, and they are more likely to terminate the relationship with the service provider when an opportunity arises (Fullerton, 2005). No evidence has been found regarding an association between negative calculative (locked-in) commitment and PWOM.

Value has been positively associated with repatronage and PWOM in the professional service sector (Trasorras *et al.*, 2009) and wider business-to-business services (Bolton, Smith and Wagner, 2003; Molinari, Abratt and Dion, 2008; Briggs and Grisaffe, 2010). However, Cater and Cater (2010) identified no such relationship of value-based commitment with either repatronage or PWOM in a business-to-business setting.

Other than the study of Kumar, Hibbard and Stern (1994), very little evidence has been found to support a positive relationship between normative commitment and loyalty in a business-to-business exchange. Cater and Zabkar (2009) suggested it is less influential in European business-to-business exchanges for cultural reasons. However, it was included in the conceptual model as a candidate antecedent to both repatronage and PWOM for the purpose of completeness. Table 4-2 summarises the relationships between the different dimensions of

commitment and loyalty. The findings are shown for key studies that empirically examine relationships between the different dimensions of commitment and loyalty expressed by repatronage, PWOM or a fused construct containing both. The evidence for the impact of affective commitment on both repatronage and PWOM is strong. The evidence is mixed with respect to the other three commitment dimensions.

Table 4-2. Relationships between multidimensional commitment and loyalty

Article Author(s)	**Sector**	**Finding**
Cater and Cater (2009)	Business-to-business professional services	A positive relationship was found between affective commitment and a combined repatronage/PWOM construct.
Cater and Zabkar (2009)	Business-to-business professional services	A positive relationship was found between affective commitment and a combined repatronage/PWOM construct. No relationship was found between normative commitment and a combined repatronage/PWOM construct. No relationship was found between locked-in commitment and a combined repatronage/PWOM construct.
Cater and Cater (2010)	Business-to-business logistical services	A positive relationship was found between affective commitment and both repatronage and PWOM. No relationship was found between normative commitment and either repatronage or PWOM. No relationship was found between locked-in commitment and PWOM. A positive relationship found between locked-in commitment and repatronage. No relationship was found between value-based commitment and PWOM. No relationship was found between value-based commitment and repatronage.
Gounaris (2005)	Business-to-business professional services	A positive relationship was found between affective commitment and repatronage. No relationship was found between locked-in commitment and repatronage.
Rauyruen and Miller (2007)	Business-to-business courier services	No relationship was found between locked-in commitment and repatronage (supplier). No relationship was found between locked-in commitment and PWOM (supplier). No relationship was found between locked-in commitment and repatronage (employee). No relationship was found between locked-in commitment and PWOM (employee). A positive relationship was found between affective commitment and PWOM (supplier). No relationship was found between affective commitment and PWOM (supplier). No relationship was found between affective commitment and repatronage (employees). No relationship was found between affective commitment and PWOM (employees).
Schertzer, Schertzer and Dwyer (2013)	Business-to-business professional services	A positive relationship was found between affective commitment and repatronage. A positive relationship was found between value-based commitment and repatronage.

Figure 4-2 illustrates the proposed relationships of the four dimensions of commitment with both repatronage and PWOM. The dimensions of commitment are conceptualised as being positively associated with both aspects of loyalty. The exception to this is locked-in commitment and PWOM, due to the lack of any evidence of an association between the two. Dedication-based relationship maintenance factors positively influence advocacy, whereas constraint-based relationship maintenance factors do not (Bendapudi and Berry, 1997). Indeed, evidence from other sectors suggests that restraint-based relationship factors can even lead to negative WOM from clients, due to resentment (Fullerton, 2003).

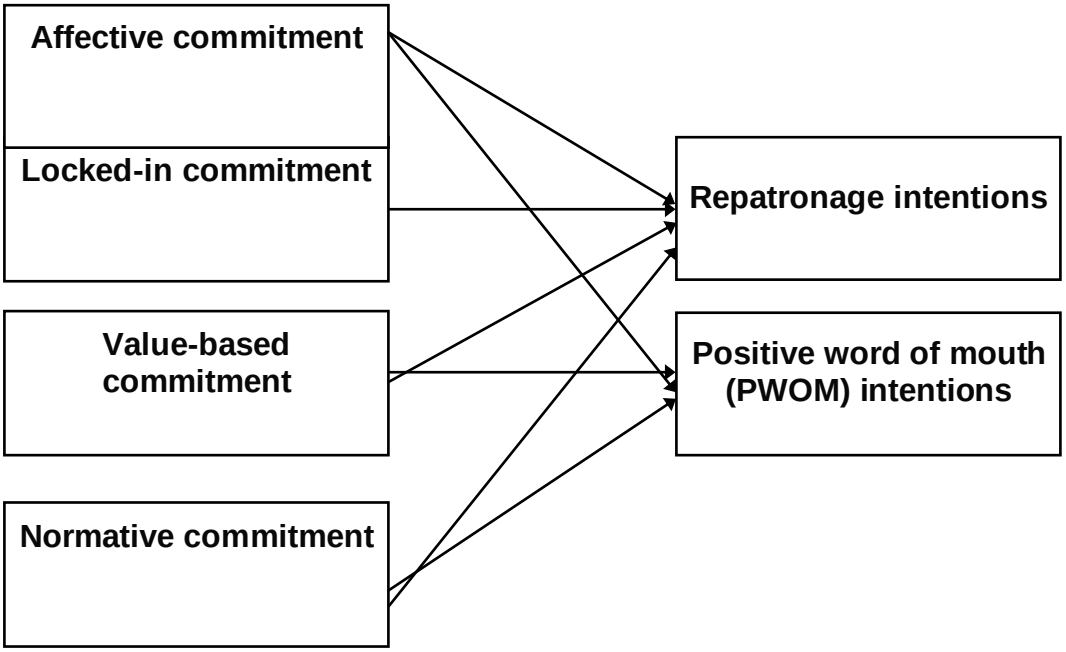


Figure 4-2. Model of relationship between CPS-client commitment and loyalty.

For the purposes of this study, the proposed relationships shown in Figure 4-2 are demonstrative of client commitment to CPS suppliers. By way of contrast, Rutherford *et al.* (2008) conceptualised commitment as being bidirectional and reciprocal between service suppliers and clients. This arises from equity theory, whereby each party develops commitment to the other in exchange for certain

desirable outputs. If the client perceives inequity between what they receive in exchange for what they themselves give, they may question the CPS supplier's commitment to them, increasing the risk of them switching to another supplier. However, if they perceive sufficient desirable outcomes and reciprocal commitment from the incumbent, they will be inclined to continue the relationship. Nevertheless, for expediency purposes, only client commitment towards CPS suppliers has been investigated in this study.

To summarise this section, this research examines the differential effects of four different dimensions of commitment on loyalty manifested as repatronage and PWOM. Far fewer studies have examined the impact of commitment on such a granular dimension basis, and none were found that have done so in a CPS context.

4.5. Trust

Trust is an important ingredient for successful long-term relationships between clients and suppliers in the construction industry (Black, Akintoye and Fitzgerald, 2000; Challender, Farrell and McDermott, 2019). It is a critical component of service relationships in general (Parasuraman, Zeithaml and Berry, 1985; Ring, 1996) and a "*fundamental relationship building block*" (Wilson, 1995, p. 377). Whilst trust is principally a psychological state, it directly informs the actions and behaviours of parties in an exchange relationship (Manu *et al.*, 2012).

Levels of trust between suppliers and clients on construction projects have traditionally been low, with a reliance on contracts as a means of exchange governance (Jiang, Henneberg and Naude, 2011). Others have suggested this is too simplistic, with trust between parties varying from project to project (Saad, Jones and James, 2002). However detailed contracts may be, they are insufficient as a sole means of resolving all the problems that may arise on a project.

Therefore, trust is often important in the maintenance of working relationships during the delivery of construction work (Manu *et al.,* 2012).

An earlier broad definition of trust in an exchange context is "*one party's belief that its needs will be fulfilled in the future by actions undertaken by the other party*" (Anderson and Weitz, 1989, p. 312). Alternatively, it has been defined as "*a willingness to rely on an exchange partner in whom one has confidence*" (Moorman, Deshpande and Zaltman, 1993, p. 82). Manu *et al.* (2015) suggested that construction clients often rely on trusted suppliers, particularly during the delivery of complex services that have a high degree of human-asset specificity. Thus, the reliance aspect of trust is likely to be particularly important during the delivery of CPS.

Trust has been conceptualised within the wider professional and business-to-business service literature as consisting of multiple aspects, including integrity (e.g. Morgan and Hunt, 1994; Geyskens *et al.*, 1996; Doney and Cannon, 1997; Sharma and Patterson, 1999), reliability (e.g. Sharma and Patterson, 1999; Cater and Cater, 2009), trustworthiness (e.g. Sharma and Patterson, 1999; Moorman, Deshpande and Zaltman, 1993; Gounaris, 2005) and benevolence (e.g. Doney and Cannon, 1997; Gounaris, 2005; Cater and Cater, 2010).

Agreement on the definition of trust in a construction-related context has proved elusive (Pryke and Smyth, 2006). Clients need to feel safe in their dealings with service providers, which is magnified as the risk and complexity of service provision increases. Trust in a construction professional's ability to deliver on time and to budget is vitally important to clients (Carr, de la Garza and Vorster, 2002). Poor CPS performance is of high consequence to clients due to the risks of buildings failing, design requirements not being met, or projects exceeding programme timescales or budgets. Given the likely degree of information asymmetry (or knowledge gap) between the parties, a client's confidence in the

capability and integrity of a CPS supplier is a key determinant in their decision to continue the service relationship. Manu *et al. (*2012) identified a key aspect of trust in a construction context to be the willingness of a party to accept vulnerability, based on the positive expectations of the intentions or behaviours of another. Trust in construction supply relationships has also been defined as a combination of transparency, integrity, competence and reliability (Pryke and Smyth, 2006). Jiang, Henneberg and Naude (2011) explained that a trustworthy construction service supplier is one that has both the ability and the willingness to deliver what the client desires.

The importance of trust can be explained partly by the complexity and intangibility of what is delivered in less-tangible services (Doney, Barry and Abratt, 2007). In addition to competence, another important aspect of trust is a client's belief that a relationship partner will act in the best interests of the other (Wilson, 2005). "*Clients don't care how much you know until they know how much you care*" is a powerful illustrative quote by Sharma and Patterson (2000, p. 163) during their initial exploratory research of professional-client relationships.

Whatever mitigating measures are put into place, a betrayal of trust (whether it is down to a breach of integrity, benevolence or competence) is likely to have a significant negative impact on CPS-client loyalty. It is important for clients to have confidence that a supplier will not behave opportunistically. Anderson and Narus (1990, p. 45) referred to this aspect as "*the firm's belief that another company will perform actions that will result in positive outcomes for the firm and not take unexpected actions that result in negative outcomes*". Moorman, Deshpande and Zaltman (1993, p. 315) included the aspect of "*willingness*" to rely on a supplier, whereas Morgan and Hunt (1994) argued that this is implicit in trust.

Although Rauyruen and Miller (2007) identified a significant relationship between trust and PWOM, they noted no significant relationship between trust and

repatronage. However, their study focused on business-to-business services with lower interaction intensity and complexity than CPS. In contrast, Doney, Barry and Abratt (2007) demonstrated that trust is indeed positively associated with repatronage in a business-to-business-services setting. The impact of trust on loyalty has been conceptualised as being mediated by commitment in several studies of business-to-business services (Morgan and Hunt, 1994; Gounaris, 2005; Cater and Cater, 2009; Cater and Zabkar, 2009; Chang *et al.*, 2012). However, there is evidence of its direct positive influence on loyalty in the context of business-to-business professional services (Slapnicar, Groff and Stumberger, 2015) and wider business-to-business service industries (Caseres and Paparoidamis, 2007; Doney, Barry and Abratt, 2007; Briggs and Grisaffe, 2010; Ramaseshan, Rabbanee and Tan Hsin Hui, 2013; Jeong and Oh, 2017).

4.6. Service quality

Service quality can be defined as a client's overall judgement about a supplier's performance (Zeithaml, Berry and Parasuraman, 1996). Ultimately, a supplier's ability to deliver what a construction client wants is central to their procurement decision (Boyd and Chinyio, 2006). The Latham Report (HMSO, 1994) revealed the need for construction suppliers to focus on identifying and fulfilling their clients' core needs. Problems on construction projects (such as delays, rework, cost overrun and disputes) can occur due to poor-quality designs and contract administration (Dosumu and Aigbavboa, 2019). Clients are unlikely to return to a supplier that delivers a level of service that falls short of their expectations (Zeithaml, Berry and Parasuraman, 1996). Furthermore, CPS suppliers cannot expect their clients to offer referrals and recommend them to others unless they provide a high-quality service (Hoxley, 1995).

Service quality has been described "*a key strategic weapon*" for suppliers of business-to-business services (Jayawardhena *et al.*, 2007, p. 575). Of those CPS suppliers responding to a survey, 60% considered service quality to be their major source of competitive advantage (Jaafar, Aziz and Wai, 2008). Whilst much has been written about the importance of service quality in the construction industry, many clients struggle to assess it (Aliakbarlou, Wilkinson and Costello, 2017). Thes problem of clients appraising service quality is magnified for CPS, given the even greater degree of intangibility of the services delivered. Furthermore, given that the consequences of professional service delivery outcomes are particularly high, clients are likely to be even less amenable to low standards of service quality (Rosenbaum, Massiah and Jackson, 2006). Customer perceptions of service quality in other business-business services have been associated with repatronage (Bendapudi and Leone, 2002) and with PWOM (Rauyruen and Miller, 2007).

One of the most widely adopted instruments for operationalising service quality is the all-encompassing SERVQUAL ('service quality') scale (Parasuraman, Zeithaml and Berry, 1988, p. 12). SERVQUAL has been applied in research into a wider range of industries, including construction (Forsythe, 2015). It has also been adapted for measuring chartered surveying service quality (Hoxley, 2000). Despite its popularity, SERVQUAL has its critics. Cronin and Taylor (1992; 1994) suggested that SERVQUAL should be refined due to several issues, including its limited power to predict repatronage. These criticisms led the authors to refine the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1994). A positive relationship between service quality (operationalised by the refined SERVQUAL instrument) and "*behavioural intentions*" (a construct combining repatronage and PWOM) in the context of business-to-business services was found by Zeithaml, Berry and Parasuraman (1996, p. 33).

Other models of service quality have been developed for the context of business-to-business services. For example, Lam *et al. (*2004) have operationalised service quality by timeliness, ease of use, promptness and understanding client needs. Zolkiewski *et al*. (2007) developed a service-quality construct consisting of core-quality, employee attitudes and behaviours, and specific service encounters. SERVQUAL and related models encompass multiple dimensions of service quality. In the context of architectural services, Prakash and Phadtare (2018) created a service-quality scale incorporating core quality, communication quality and relationship quality. The service-quality scale developed for quantity surveying services by Akinsiku (2016) measures attributes of tangibility, reliability, responsiveness, assurance and empathy, in line with the revised SERVQUAL model (Parasuraman, Berry and Zeithaml, 1991).

The use of these broad, all-encompassing service-quality constructs may indeed be of practical use for CPS suppliers in evaluating their own performance. However, the aim of this research was to identify what specific antecedent factors best predict CPS-client loyalty. Additionally, there is evidence that, for professional services, service quality has distinct facets relating to the way the services are delivered versus the quality of the core outcomes (Hausman, 2003; Sarapaivanich and Patterson, 2015). For these reasons, the service-quality model developed by Gronroos (1984, p. 38) was adopted in this research. This conceptualisation has separate dimensions for 'technical quality' (*what* is delivered) and 'functional quality' (*how* it is delivered). Findings from studies in other professional services reveal technical quality and functional quality to be related-but-separate constructs (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015). In the same manner, Prakash and Phadtare (2018, p. 675) included these aspects within their architectural service-quality model, with technical quality measured by "*outcome-related" items and functional quality measured by "process-related" items*. The

concept of functional quality also aligns with the view of Fischgrund and Omachonu (2014) that service quality in a construction context is mainly about delivering the service on time, whilst ensuring that the basic characteristics of the deliverables meet client requirements.

4.6.1. Technical quality.

Technical quality is associated with the core service delivered by the CPS supplier. The effective delivery of construction clients' requirements is a fundamental aspect of service quality and is essential for project success (Kamara, Anumba and Evbuomwan, 2002).

As discussed in Chapter 2, CPS suppliers demonstrate a high degree of the knowledge-intensity trait. Lu and Sexton (2006, p. 1269) argued that CPS suppliers are defined by the degree to which they own, generate and apply knowledge when advising their clients, to the extent that they define them as "*construction knowledge intensive professional service firms*". They explain that a large determinant of CPS suppliers' success is how well they apply this knowledge during the co-creation of service delivery to help the client achieve their goals. The ability to discern and deliver these requirements is especially important for CPS suppliers, as construction clients often struggle to define their desired outcomes from a project. Thus, in order to deliver a successful outcome, CPS suppliers must discern and articulate "the client's aspirations, desires and needs" via a design or description of the particular service to be delivered (Boyd and Chinyio, 2006, p. 12). During the provision of advice, it is incumbent upon CPS suppliers to both understand their clients' requirements (including with respect to legal-compliance aspects) and educate them as to what they need. Kamara, Anumba and Evbuomwan (2002, p. 3) stressed the importance of construction professionals recognising "*the voice of the client*" and succeeding in satisfying the client's wishes

and expectations in line with Egan's call for a more client-focused approach (Egan, 1998).

In the context of business-to-business professional services, technical quality has been defined as *"actual outcomes of the core service*" (Sarapaivanich and Patterson, 2015, p. 885). Technical quality has also been operationalised in wider professional service studies by the perceived quality of the advice provided and the degree to which the service provider helps achieve the client's goals (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015). The quality of advice given by PSFs has been linked to client loyalty (Sarapaivanich and Patterson, 2015). In the context of professional service delivery, technical quality is associated with the ability to correctly advise clients, which is an aspect described as "*the extent to which someone is perceived to be capable of making correct assertions*" (Martenson, 2008, p. 123). Fundamentally, clients expect CPS suppliers to provide advice that serves to mitigate project risk (Dosumu and Aigbavboa, 2019). Furthermore, clients who perceive they have been advised poorly tend to defect to other professional service suppliers (Palihawadana and Barnes, 2004).

4.6.2. Functional quality.

Functional quality (also referred to as "*process quality*" by Sarapaivanich and Patterson (2015)) is associated with clients' perceptions of the way the service is delivered. Speed of delivery and reactiveness are the characteristics most associated with functional quality. However, supplier flexibility is also an important success factor in developing enduring relationships with clients in the construction industry (Black, Akintoye and Fitzgerald, 2000). Gronroos (1984) argued that functional quality may have an even more profound influence on clients' perceptions than technical quality. In professional services, "*technical competence*

is taken as a given" (D'Aish, 2015, p. 164). Based on evidence from wider professional services, Hausman (2003) stated that, where clients lack the necessary expertise to evaluate the advice and services delivered, functional quality acts as a proxy for technical quality. Baker and Lamb (1994) found that the way architects handle the service delivery process has a large impact on clients' perceptions of overall quality.

For clients of PSFs that are unable to assess technical outcomes confidently (due to lack of knowledge or the intrinsic opacity of the service) the process of service delivery becomes foremost in forming attitudes and influencing behavioural intentions (Sharma and Patterson, 1999). Sarapaivanich and Patterson (2015) maintain that the tangible outputs of professionals have less influence on a client's evaluation of service quality compared to the perceptions of how well the service has been delivered. A key reason for this is that the degree of technical quality of professional services may only be revealed over months or years. This is true for many CPS sub-professions, such as building surveyors and engineers, because the defects and points of structural failure may take time to manifest visibly. As Houlder and Williamson (2012, p. 51) explained, "*The competence of your structural engineer may only come to light twenty years later when your building is condemned as unsound or a bridge collapses.*" However, it is arguably less relevant to certain design-related CPS disciplines where the outputs (drawings and completed designs) can be appraised by the client soon after completion. Functional quality has commonly been operationalised using measures such as timeliness (Sharma and Patterson, 1999; Caceres and Paparoidamis, 2007; Sarapaivanich and Patterson, 2015) and courtesy (Sharma and Patterson, 1999).

4.6.3. Communication quality

Effective communication is necessary for relationship longevity between clients and suppliers in the construction industry (Black, Akintoye and Fitzgerald, 2000). Traditionally, many professionals have communicated with their clients in a controlling manner. However, clients are increasingly more assertive and expect to be consulted effectively during service provision (Sarapaivanich and Patterson, 2015). There is a diverse range of challenges to effective communication for those working within project-based environments (Kissi, Dainty and Liu, 2012). The goal of delivering what construction clients want starts with the ability to articulate their needs clearly in the form of a co-created brief (Kamara, Anumba and Evbuomwan, 2002). Professional services are intangible, customised and technically complex, hence the importance of the client-communication process (Sarapaivanich and Patterson, 2015).

For professional service suppliers, communication skills are paramount for maintaining client relationships (Patterson, 2016). Some scholars have conceptualised communication to be one aspect within a broader service-quality scale (Parasuraman, Zeithaml and Berry, 1994; Zeithaml, Berry and Parasuraman, 1996) or as part of functional quality (Caseres and Paparoidamis, 2007). However, communication quality was considered to be so important to the successful delivery of CPS in this research that it was conceptualised as a separate facet of service quality, as it has been in several other professional service studies (e.g. Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015). Effective client communication suggests to clients "*notions of balance, symmetry and reciprocity*" (Duncan and Moriarty, 1998, p. 6). An ability to understand the clients' preferences and to "*speak the language*" enhances perceptions of quality and value, influencing the exchange outcomes (Schertzer, Schertzer and Dwyer, 2013, p.613).

The experience and knowledge of clients on construction projects varies widely from novice to expert (Gameson, 1991). Given that CPS suppliers are engaged for their ability to provide specialist advice and deliver highly technical services, there is likely to be some knowledge disparity between the parties, which is defined as "*information asymmetry*" (Connelly *et al.*, 2011, p. 39). Where this exists, it is difficult for less-knowledgeable clients to evaluate technical outcomes confidently, even after service delivery. For example, someone without the benefit of a chartered building surveyor's training and experience would be unable (at least in the short-term) to evaluate a structural-movement diagnosis confidently. The concept is not one of "*style over substance*" (Sparks and Areni, 2002, p. 571), but rather the efficiency with which the service provider succeeds in overcoming the knowledge gap between themselves and the client. Signalling theory posits that whether communicators are perceived as being effective is based on their ability to overcome information asymmetry between the parties (Connelly *et al.*, 2011). Clients who lack the technical expertise required to evaluate what is delivered may use communication effectiveness (as well as functional quality) as a proxy for technical quality, which in turn translates into loyalty.

Communication quality has been demonstrated to have a direct impact on loyalty during the delivery of business-to-business professional services (Fincham, 1999; Sarapaivanich and Patterson, 2015) and is therefore included in the conceptual model. In a professional service context, communication quality has been operationalised in several ways, such as communication frequency and service-provider accessibility (Sarapaivanich and Patterson, 2015), keeping the client informed of progress, and explaining concepts meaningfully (Sharma and Patterson, 1999).

4.7. Satisfaction

Satisfaction has been described as a client's post-choice evaluative judgement of services rendered (Cahill *et al.*, 2010). It is associated with the confirmation or disconfirmation of client expectations or "*the perceived difference between prior expectations and actual performance*" (Watson *et al.*, 2015, p. 793). Attitudinal judgement about purchases can be applied in relation to an individual or series of transactions (Yi, 1990). The impact of determinants, such as service quality, on client satisfaction in the construction industry have been demonstrated empirically (Ahmed and Kangari, 1995; Cheng, Proverbs and Oduoza, 2006), However, research examining the impact of satisfaction on loyalty outcomes is lacking.

There is slightly inconsistent evidence for an association between satisfaction and repatronage. In this respect, it has been discussed that "*satisfaction is not enough*" (Oliver, 1999, p.33) and it is not a perfect predictor of loyalty behaviour (Narayandas, 2005). Nonetheless, satisfaction has been associated positively with client loyalty in professional services (Trasorras, Weinstein and Abratt, 2009). These findings conflict with the wider study by Naumann *et al. (*2010) of business-to-business services, which founds that 80% of apparently highly satisfied clients are inclined to switch service providers.

Monitoring satisfaction provides valuable information about a client's current disposition towards a supplier. However, it has often been conceptualised in the form of a broad construct associated with a client's overall attitude about a service, encompassing a wide range of economic and non-economic factors (e.g. Cater and Zabkar, 2009). Extant studies investigating the relationship between satisfaction and loyalty tend to use measures that assess the degree to which clients are satisfied without a focus on *why* they were or were not satisfied (e.g. Lam *et al.*, 2004; Bennett, Hartel and McColl-Kennedy, 2005; Molinari, Abratt and Dion, 2008; Spreng, Hui Shi and Page, 2009; Trasorras, Weinstein and Abratt,

2009). To understand clients' motivations and subsequent behaviour, it is necessary to investigate the reasons why clients choose to re-engage suppliers (Sheth and Parvatiyar, 1995; Frow, 2007). An interesting alternative approach to this research could have been to develop a multidimensional form of satisfaction. However, given that the potential drivers of loyalty were already included via other selected antecedents, satisfaction was not included in the already-complex model.

4.9. Contrasting employee and firm influences on client loyalty

A final aspect to account for is the influence of individual employees versus the firm collectively on CPS-client loyalty. Relationships that develop during construction projects exist on both business-to-business and individual-to-individual levels (Pryke and Smyth, 2006). The bonds between professional service suppliers and their clients are held together by a combination of firm and individual-level relationships (Broschak, 2015). The client's association with the employee and firm are separate facets within an intermingled relationship (Bove and Johnson, 2006, p. 80). Bonds can develop at both interpersonal and inter-organisational levels (Doney and Cannon, 1997; Vafeas, 2011). In business-to-business services, the client can and does make independent judgements about the individual employee(s) they deal with versus the firm (Bove and Johnson, 2006; Anaza and Rutherford, 2014). In business-to-business services, relationships between the individuals representing the service supplier and the client organisation play significant roles in service continuity (Cater and Zabkar, 2009).

The role that individual client-facing employees play is important to consider during this research, as a consequence of them being an important source of professional service differentiation (Sharma and Patterson, 1999). Relatively few studies have disentangled the impact on client loyalty made by employees versus

their employing firms. Palmatier, Scheer and Steenkamp (2007) warned that researchers and suppliers are reporting over-optimistic levels of client loyalty, as a proportion of it may be targeted towards individual employees rather than the supplier firm. No known studies have considered the differential impact of individual employees versus the firm collectively on client loyalty in a CPS context.

The client-facing individual at the firm is referred to in several different ways in the literature. In the context of professional services, such individuals are referred to as "*boundary spanners*" (Lian and Laing, 2007, p. 709; Vafeas, 2010, p. 901). In a construction service context, such individuals have also been referred to as the "*key account manager[s*]" (KAM[s]) (Pryke and Smyth, 2006, p.15). However, Bendapudi and Leone (2002, p. 84) found that the term "*key contact employee*" (KCE) was intuitively understandable to the clients they interviewed. Furthermore, in a CPS context, the individual with whom the client has the strongest relationship may be an employed practitioner with whom the client has more regular contact, rather than a manager. Therefore, KCE is the initialism primarily used in this research when referring to the individual employee(s) representing the CPS supplier.

Professional service knowledge exists on both an individual and a collective level (Lowendahl, 2005; Skjolsvik and Breunig, 2018). At the individual level, knowledge can relate to skills and abilities for carrying out particular tasks. This can derive from education, personal development and experience. It can also concern factual knowledge about a project or a client. Lowendahl (2005) cited examples of clients demanding the service of particular people within PSFs, demonstrating their importance to the service proposition. Tellefsen and Thomas (2005) revealed that client commitment to KCEs (personal commitment) and to the firm (organisational commitment) are empirically distinct. They provide evidence that clients can develop personal bonds with KCEs that positively impact the strength and

structure of the inter-organisational relationship. At the collective (supplier firm) level, knowledge refers to experience, procedures, ways of doing things and working culture. Experience refers to the portfolio of past projects, which is embedded in the combined experience of the supplier firm (Malhotra and Morris, 2015; Skjolsvik and Breunig, 2018).

The repurchasing decisions of professional services are influenced by a broad set of relationships at both personal and organisational levels. Disentangling the two is difficult, as the development of organisational relationships is frequently perceived to be anchored in the personal relationships between employees in the respective organisations. These in turn influence the service repurchase decision (Laing and Lian, 2005). The intensive interaction between individuals makes the KCE the "*single most important source of the relationship with the client*" (Sharma, 1994, p. 16).

The nature of business-to-business services in certain contexts can amplify the influence of the KCE on the relationship (Tellefsen and Thomas, 2005). Services (particularly those of a professional nature) are intangible, with value derived from the actions of the service provider during the process of co-creation. Furthermore, due to the nature of professional service provision, the KCE often has a better understanding of the client's needs than anyone else at the employing firm. The greater the degree of service customisation required, the more important the individual's professional skill level and judgement will be (Lowendahl, 2005). Customisation involves the holding and application of knowledge at a localised level, making it harder for a firm to monitor work and to harness the learning collectively (Zardkoohi *et al.*, 2011).

A KCE is instrumental to their firm's success because they interact directly and manage the firm's relationships with their clients. Evidence from other industries suggests that a client's loyalty to a KCE increases their overall loyalty to the

service firm, providing that the person remains in position (Bove and Johnson, 2006; Gwinner, Gremler and Bitner, 1998). Interpersonal relationships often have stronger and more enduring effects than individual-to-firm relationships (Hamilton and Sherman, 1996). Pemer and Skjolsvik (2019, p. 359) have identified the importance of "*personal chemistry*" as a building block in PSF-client relationships. In such a situation, the firm's competitive advantage and differentiation comes from the client-KCE relationship (Bendapudi and Leone, 2002).

There are risks associated with personal loyalty for supplier firms, to the extent that it has been described as "*a double-edged sword*" (Palmatier, Scheer and Steenkamp, 2007, p.186). KCE-owned loyalty is independent of the KCE's affiliation with the suppler firm. A KCE is a source of loyalty to a firm only for as long as they maintain affiliation with the employing firm. The analysis of CPS in Chapter 2 presented evidence that they are often highly customised and relational. Because of this, much of the unique project knowledge and positive client intentions may effectively be 'owned' by the individual.

Professional firms often face difficulties in retaining key skilled employees, many of whom serve as the focal point of contact for customers (Von Nordenflycht, 2010). A client may perceive that they have a stronger relationship with the KCE than the firm. Relational bonds at the interpersonal level can even result in greater loyalty to the KCE than the firm itself (Johnson, Barksdale and Boles, 2001; Vafeas, 2010). Additionally, the KCE may possess the project- or asset-specific knowledge that is essential for service delivery. This creates a challenge for CPS suppliers as it magnifies the KCE's bargaining power. The relationship a firm has with a client can be undermined if a KCE leaves or is transferred (Bendapudi and Leone, 2002). In a construction context, there is a risk that "*when a person changes jobs, the relationships with others from the former role migrate to the new one*" (Pryke and Smyth, 2006, p. 10). In addition, KCEs think and act as individuals rather than

as simple extensions of their firms. They may manage the exchange process to fulfil their own personal goals instead of those of their employer (Tellefsen and Thomas, 2005). In the context of CPS, Ling (2003, p. 135) argued that "*The individual architect is evaluated, and not the firm, because he/she will ultimately determine the quality of performance*." The depth and tenure of the KCE-client-representative relationship impacts upon the degree of risk for the supplier firm posed by personal loyalty (Bermiss and Greenbaum, 2016).

Contrary to these assertions, it has been suggested that individual professionals "*may come and go*", but a stable relationship with the firm can endure irrespectively (Eisingerich and Bell, 2007, p. 256). In their business-to-business professional service study, Wathne, Biong and Heide (2001) asserted that interpersonal relationships are influential in retaining client accounts, but less so than constraint factors, such as the costs and risks associated with changing service providers. This phenomenon is likely to be context specific, with the importance of individual KCEs being more influential in high-contact, high-consequence services such as CPS. The impact of KCEs on loyalty is lower in contexts where there is a smaller amount of personal interaction and service co-creation. For example, in a business-to-business service setting with a lower degree of personal interaction, Rauyruen and Miller (2007) found that only the firm level of trust and commitment influences client loyalty, with KCE antecedent levels playing no significant role.

The impact of KCEs departing from firms has attracted recent academic attention. Broschak and Block (2014) observed that KCE mobility is positively associated with the dissolution of professional-firm-client relationships. Despite this, relatively few studies of business-to-business services have contrasted the impact of KCEs versus firms on client loyalty. Figure 4-3 demonstrates that most of the service-loyalty articles reviewed considered loyalty on only one level (full details are

provided in Appendix B). This is surprising, given that the termination of the relationship between the client and the KCE can have damaging effects on the relationship, particularly in professional services (Vafeas, 2010).

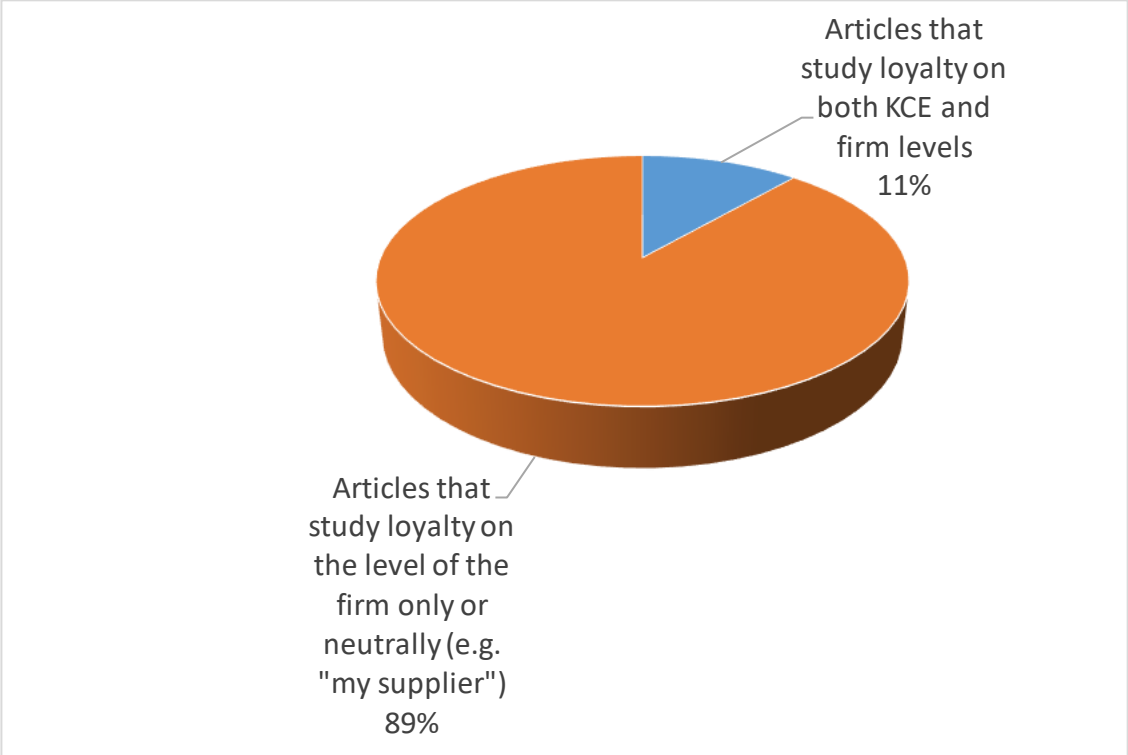


Figure 4-3 Firm versus KCE loyalty in the reviewed loyalty literature.

Some scholars have gone as far as to contrast KCE-level effects with supplier-level effects in business-to-business service settings. Commitment has been conceptualised at both KCE and firm levels (Rauyruen and Miller, 2007). Trust, at both KCE and firm levels, has also been studied in different business-to-business contexts (Doney and Cannon, 1997; Ganesan and Hess, 1997; Rauyruen and Miller, 2007). Service quality has been operationalised in surveys via perceptions of the individual KCE. Example survey items include the use of "*my advisor*" (Sharma and Patterson, 1999, p. 166), and "*the auditor*" (Sarapaivanich and Patterson, 2015, p. 981). It has also been operationalised using the firm collectively (e.g. "*the staff*" in Chenet, Dagger and O'Sullivan [2010, p. 339]) or neutrally (e.g. "*my supplier*" in Caceres and Paparoidamis [2007, p. 849]). No

studies were found that simultaneously examined service quality at both KCE and firm levels.

This research aims to explore the impact of antecedents on loyalty at both KCE and firm levels in a CPS context. Other than Anaza and Rutherford (2014), and Rauyruen and Miller (2007), no research could be found in a business-to-business service context that considers the multilevel (firm and KCE) antecedent impact of loyalty expressed as both repatronage and PWOM differentially.

4.10. Rational versus relational loyalty antecedents

Earlier parts of this Chapter discussed the key service-related antecedents, representing a wide range of client motivations posited to result in CPS-client loyalty. Whilst not a binary classification, they may be broadly categorised as being rational or relational. Rational antecedents are those that arise primarily from a client's motivation to achieve their job-related and organisational goals. These include a desire for a high level of service, for risk avoidance (Cater and Cater, 2010) and value (Cater and Zabkar, 2009). On the other hand, the literature suggests that relational antecedents are just as (if not more) important in determining client loyalty in professional service contexts. Clients are social beings who have human needs, such as friendship, belonging and personal confidence in their suppliers (Moorman, Zaltman and Deschpande, 1992). Bendapudi and Berry (1997, p. 13) used the terms "*dedication-based*" and "*constraint-based*" relationship maintenance, which reflect the relational and rational aspects, respectively, that act as the glue within business-to-business relationships.

The principles of TCE theory posit that parties are motivated mainly by minimising the economic cost of an exchange. Relationships are maintained so long as the rationally derived transaction costs and benefits are favourable to the parties involved. Furthermore, clients may continue in existing relationships due to the

perceived risks and costs associated with establishing new ones (Williamson, 1975). However, in real-world environments, markets do not perform in a perfectly mechanistic manner. Rather than being based purely on economic factors, exchanges can be affected by non-rational behaviour (Pervan and Johnson, 2002). Social bonds or personal friction can attenuate clients' behaviour (Dwyer, Schurr and Oh, 1987; Morgan and Hunt, 1994). Relational factors, such as sentiment and personal ties, can influence relationship outcomes. It has been argued that non-economic (relational) factors play a bigger role than economic (rational) factors in professional service markets (Harste and Richter, 2009). Contractual and relational mechanisms need not be mutually exclusive, and they have been shown to be complementary in both construction projects (Lu *et al.*, 2015) and nd wider services (Fullerton, 2003).

Given that it integrates relational (affective or personal) and rational (risk-avoiding or value-seeking) motivations, a compelling case can be made for applying social exchange theory (SET) to help understand CPS-client behaviour. SET has been used to underpin other client-supplier studies in the professional service sector (e.g. Cater and Cater, 2010) and wider business-to-business markets (e.g. Morgan and Hunt, 1994; Anaza and Rutherford, 2014). It combines elements of economics, psychology and sociology (Susanta, Idrus and Nimran, 2013). The basic principle of SET is that actors will form and retain relationships in anticipation that doing so will result in intrinsic or extrinsic benefit (Blau, 1964). People remain in or terminate relationships depending on comparisons of the current relationship with potential alternatives (Thibaut and Kelly, 1959). Relationships are formed out of a series of encounters over time, during which economic, social or information exchange occurs. The rewards that a party gains from an exchange relationship are judged relative to a situation-specific standard, such as that gained from prior experience of CPS or other service providers. Whilst economic rewards are key in

business-to-business relationships, relational outcomes are also important and are, to some extent, interchangeable. Blau (1968, p. 455) argued that the "*most important benefits involved in social exchange do not have any material value on which an exact price can be put at all, as exemplified by social approval and respect*". A fundamental assumption of SET is that people engaged in exchange relationships are motivated by the desire to increase gain and avoid loss. Gains may be associated with economic or social benefits, whereas loss includes financial cost, time and risk. SET posits that individuals enter into and remain in mutually dependent relationships on the basis that they achieve desirable outcomes that they could not achieve without the exchange partner.

Regardless of how the types of outcome are weighted, both economic and social outcomes are evaluated together by clients to determine whether the relationship should be continued or terminated (Thibaut and Kelly, 1959; Blau, 1964). Within an exchange relationship, a party derives utility both from the attributes of the service and from interpersonal relationships (Wathne, Biong and Heide, 2001). Perceived reciprocity of exchange outcomes between clients and PSFs is essential in the development of mutual commitment and relationship stability (Bendapudi and Leone, 2002). If previous exchanges have been positive, clients are likely to also expect future exchanges to be positive as well (Lambe, Wittmann and Spekman, 2001). The initial transactions are important in determining if the future business relationship will continue, expand or dissolve. Dwyer, Schurr and Oh (1987) used SET to develop a business-relationship lifecycle, moving through successive stages of awareness, exploration, expansion and commitment, with the attendant chance of dissolution. If the perceived reciprocity associated with the exchanges continues, then the probability of the relationship continuing increases, with the caveat that the client continues to evaluate it against alternatives to a greater or lesser degree. As experience grows, so does interdependence, trust

and mutual commitment (Lambe, Wittmann and Spekman, 2001). Table 4-3 summarises the accompanying evidence of the rational-versus-relational nature of the key-candidate service-related antecedents of CPS-client loyalty. This will be of use during the interpretation of the subsequent results to determine the degree to which the rational or relational aspects of the service delivery impact on CPS-client loyalty. It should be noted that, in this research, service quality is operationalised using the technical and functional aspects of delivery, which relate to primarily rational client motivations. This contrasts with other models that include relational aspects such as empathy in their conceptualisation of service quality, such as the SERVQUAL model developed originally by Parasuraman, Zeithaml and Berry (1985). It is appropriate to delineate rational from relational antecedents in this way prior to investigating the degree to which they influence CPS-client loyalty differentially.

Table 4-3. Antecedents classed by rational or relational motivation

Antecedent	Rational or relational	Evidence
Affective commitment	Relational	Affective commitment has been defined as an *"emotional attachment and identification*" (Meyer and Allen, 1991, p.67) and "*familiarity [and] friendship*" (Sharma, Wilson and Young, 2006, p.65).
Locked-in commitment	Rational	Locked-in commitment has been defined as and operationalised by a lack of suitable alternative suppliers or high switching costs (Cater and Zabkar, 2009). It has also been defined as situations where "*the costs and penalties associated with switching partners are viewed as prohibitive*" (Sharma, Young and Wilkinson, 2006, p.69).
Value-based commitment	Rational	Value-based commitment arises from a rational cost-benefit decision regarding "*the benefits of an exchange relationship weighted against the costs*" (Bardauskaite, 2014, p.41).
Normative commitment	Relational	Normative commitment arises out of feelings of moral responsibility (Meyer and Allen, 1990). In a business-to-business setting, this is an "*attachment due to felt obligations*" of the client to a supplier (Cater and Cater, 2009, p.786).
Trust	Rational and relational	The rational dimension of trust is associated with the reliability and integrity of the supplier. Additionally, *"the firm's belief that another company will perform actions that will result in positive outcomes for the firm and not take unexpected actions that result in negative outcomes*" (Moorman, Deshpande and Zaltman, 1993, p.315). The relational aspect of trust is a client's personal confidence in the supplier and a belief that the supplier has the client's best interests in mind (Doney and Cannon, 1997; Cater and Cater, 2010). Smyth (2006) maintained that trust is socially constructed rather than a rational judgement.
Technical quality	Rational	Technical-quality perceptions involve an objective appraisal of the degree to which "*actual outcomes or the core service" has been delivered*" (Sarapaivanich and Patterson, 2015, p.885). In a professional service context, this is associated with the degree to which the service provider helps achieve the client's goals (Sharma and Patterson, 1999).
Functional quality	Rational	Functional quality is associated with *how* the service is delivered, specifically regarding timeliness and flexibility (Sharma and Patterson, 1999; Caceres and Paparoidamis, 2007; Sarapaivanich and Patterson, 2015). Whilst it also can include courtesy (Sharma and Patterson, 1999), this does not extend to the relational concept of friendship and rapport.
Communication quality	Rational	Whilst communication may at first be considered a relational construct, in this research, communication quality is defined by professionalism demonstrated during this aspect of service delivery. Explicitly, this includes ease of access when seeking advice, communication frequency (Sarapaivanich and Patterson, 2015), updating the client and explaining technical concepts in meaningful ways (Sharma and Patterson, 1999).

4.11. The conceptual model

In this section, the conceptual model of CPS-client loyalty is presented. The terms “conceptual model”, “conceptual framework”, “theoretical model” and “theoretical framework” tend to be used interchangeably. The term “model”, as opposed to “framework”, is preferred in this study, as the former is more appropriate to research that seeks to explore the interrelationships between themes and variables (Jabareen, 2009, p. 51). The term ‘conceptual’, as opposed to ‘theoretical,’ is used because a rigorous literature review of existing theories was used to construct a new model.

The conceptual model given in Figure 4-4 shows the key service-related antecedents identified during the literature review, and their proposed influence on loyalty expressed by repatronage and PWOM. The service-related loyalty antecedents are presented at both KCE and supplier levels. The empirical basis for conceptualising the antecedents in this manner will be explored later during the qualitative phase of analysis.

Several studies determined the targets of client loyalty (e.g. Bove and Johnson, 2006; Palmatier, Scher and Steenkamp, 2007). By way of contrast, this research adopts a conceptualisation more akin to that of Rauyruen and Miller (2007) in exploring the impact of multilevel (KCE and firm) antecedents. For expediency and as a starting point in CPS-client loyalty research, it is not intended to develop a holistic model showing interrelationships and mediation/moderation effects between the antecedents. Rather, the aim is to determine those that directly influence client loyalty.

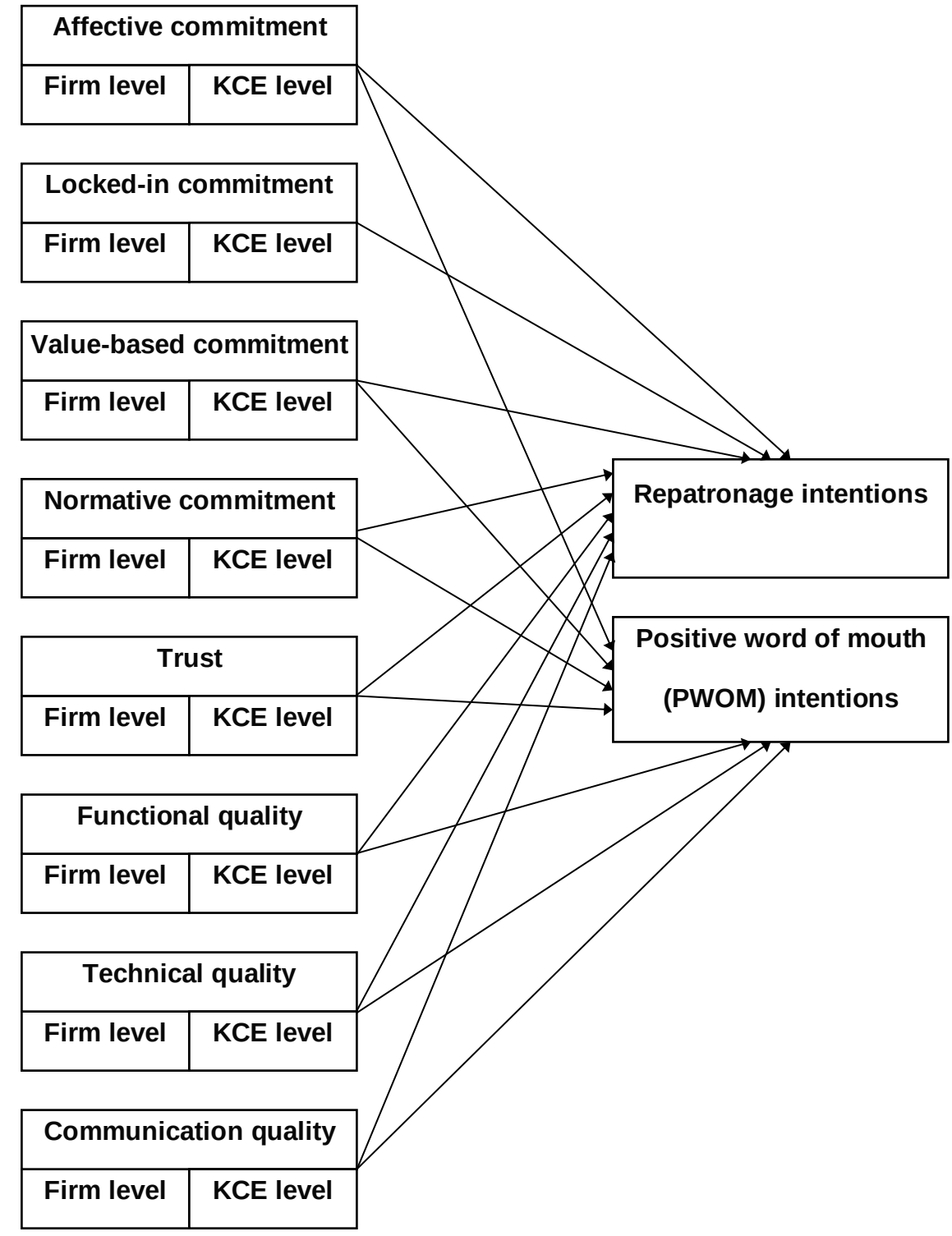


Figure 4-4. Conceptual model of CPS-client loyalty.

4.12. Chapter conclusion

Loyalty has been conceptualised and operationalised in several ways in the literature. This Chapter has explained step-by-step how the conceptual model of CPS-client loyalty was developed. Following a review of the evidence from construction management, professional and wider business-to-business literature, CPS-client loyalty has been conceptualised as consisting of repatronage and PWOM. Both have been used to represent loyalty in other professional services and wider business-to-business studies. Repatronage and PWOM are important to CPS suppliers, but for different reasons, given that they fulfil different managerial objectives. Furthermore, based on the argument that they are empirically distinct, repatronage and PWOM are presented in the conceptual model as separate facets of CPS-client loyalty. This was subject to empirical examination during the qualitative analysis (Chapter 5) and the quantitative follow-up study (Chapter 6).

The literature review identified several key-candidate service-related antecedents that are likely to influence CPS-client loyalty. Given that CPS generally involve a high degree of person-to-person interaction during scoping and delivery, the evidence suggests that relational antecedents, such as affective commitment and trust, are particularly important. The counterargument is that CPS clients operating in business-to-business markets are motivated mainly by achieving organisation goals for quality, value and risk avoidance.

The final layer added to the conceptual model was the differential impact of KCE versus the supplier firm on CPS-client loyalty. The degree to which the antecedents operate at both KCE and supplier levels, and their overall association with CPS-client loyalty, will be examined empirically in the qualitative analysis phase. Chapter 5 defines the methodology used for both the qualitative exploration and quantitative follow-up phases of the research.

Chapter 5. Research methodology

5.1. Chapter introduction

Chapter 4 outlined the development of the conceptual model for CPS-client loyalty. This chapter explains the methodology used to address the research questions, aims and objectives. Firstly, the researcher's philosophical stance and underpinning worldview are explained in context with the mixed methods research design selected. An argument is presented explaining why such a methodology was deemed appropriate for use in this study.

The remainder of Chapter 5 provides a step-by-step explanation of how the different methods used were applied during this research. In summary, an initial qualitative exploration of CPS-client loyalty was undertaken to refine the conceptual model. This was necessary to gain a rich understanding of CPS supplier-client relationships, using evidence from the lived experiences of clients and practitioners. Following this, a quantitative follow-up phase of research was conducted. The purpose of this was to test the refined CPS-client-loyalty model in the wider population and determine the degree to which the qualitative findings generalise to the wider population.

Figure 5-1 summarises the methodology used.

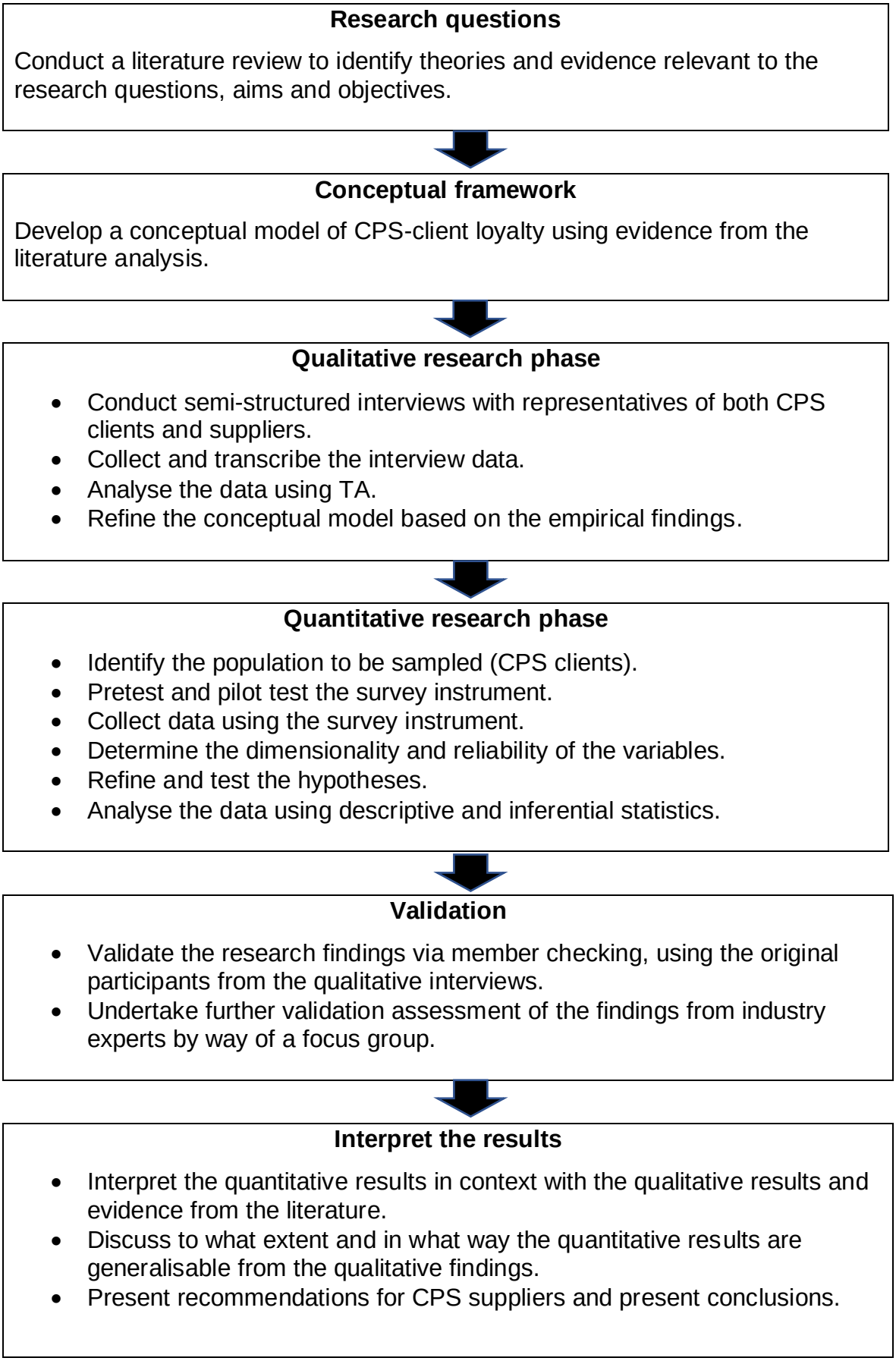


Figure 5-1. Research methodology flow chart.

5.2. Research philosophy

5.2.1. Key terms and issues associated with the research philosophy

Creswell (2013) argued that research methodologies are inextricably linked to underlying philosophical worldviews. Researchers of construction and built environment phenomena should state their philosophical assumptions explicitly in order to explain their methodology-selection decisions (Zou, Sunindijo and Dainty, 2014). The terms used to describe philosophical positions have been used in differing and interchangeable ways (Menacere, 2016). Therefore, this section defines the key terminology whilst explaining the assumptions and beliefs that underpin this research.

Research is linked to a paradigm (Kuhn, 1970), which is alternatively termed a "*worldview*" (Creswell and Plano-Clark, 2011). This is a set of assumptions and beliefs about the nature of reality and knowledge that guides one's actions (Guba and Lincoln, 2005). Different worldviews are distinguished by their associated ontology (i.e. the researcher's beliefs about the nature of reality). Using an established worldview is expedient as it allows researchers to build on an existing approach to research instead of having to construct it themselves.

Epistemology is concerned with the relationship between the researcher and knowledge, or more precisely, with a focus on what we can know, rather than what reality is ultimately like (Brinkmann and Kvale, 2015). Axiology is associated with values. Research may be value-laden or value-free, depending on the researcher's approach. Methodology is concerned with how knowledge is accessed (Guba and Lincoln, 2005; Haq, 2015). A purely objective, value-free approach is appropriate to certain research problems, such as those investigating natural science phenomena. As stated by Professor Brian Cox during a BBC radio debate, "*the arts or social sciences…it's true in those areas that you make your*

own reality. But there is also nature. This is the study of something that really doesn't care what your opinion is. Gravity isn't going to be changed by your opinion!" (Cox, Eno and Keaveny, 2018). However, human beliefs and motivations are highly complex and dynamic. With respect to social phenomena, Maxwell (2005, p. 46) declared that "*There cannot, even in principle, be such a thing as a God's-eye view, a view that is the one true objective account. Any view is a view from some perspective […] and is therefore shaped by the lens of the observer*."

The post-positivist worldview is of a singular reality existing apart from our understanding of it, with social phenomena and their meanings existing independently of social action. Post-positivism was initially considered to be an underpinning worldview for the research as a result of the arguments endorsing its application (Giddings and Grant, 2006) and its flexible, pluralist principles (Panhwar, Ansari and Shah, 2017). In contrast, according to the constructivist worldview, multiple realities exist, with these being created by our conception of them (Guba and Lincoln, 2005). These differences have led to polarised debates regarding the merits and disadvantages of binary approaches, especially within social science research; this is referred to as the Paradigm Wars (Denzin, 2010).

The construction-related problem addressed in this research is associated with social phenomena. These are unlikely to be addressed adequately by extreme positivist or interpretivist approaches (Fellows and Liu, 2015). Many pragmatists believe that the assertions of positivists and interpretivists are equally valid (Morgan, 2014).

5.2.2. Pragmatism

Saunders, Lewis and Thornhill (2019) explained that a researcher's adopted worldview must be compatible with the researcher's own beliefs about the nature of existence and how the answers to the research questions can be understood.

This section sets out the case for adopting pragmatism as an underpinning worldview during this research.

The roots of pragmatism are in the late 19th Century when it was popularised by the American philosopher Charles Sanders Pierce. Notable contributions were made by his countrymen: Williams James, George Herbert Mead and John Dewey (Bragg *et al.*, 2005). For pragmatism, the key principle is the emphasis on experience involving the continual interaction of beliefs and action. Our understanding of the world is limited by our interpretation of our experiences. Dewey sought to promote pragmatism by re-orientating debate away from metaphysical questions about the nature of reality towards a process-based approach to knowledge (Kumar, 2009).

Despite the apparent practical benefits of pragmatism as a research paradigm, questions have been raised regarding its philosophical foundations, such as its apparent dismissal of metaphysical issues. Lincoln (2010, p. 7) argued that "*The mixed-methods pragmatists tell us nothing about their ontology or epistemology*." However, the appeal of pragmatism goes well beyond the simplistic principle of "*It's true because it works*" (Rorty, 1982, p. 17). Pragmatism offers an immediate and useful middle position, both philosophically and methodologically. It involves an outcome-orientated method of enquiry that is based on action and leads iteratively to further action and the elimination of doubt (Johnson and Onwuegbuzie, 2004). It is a philosophy that focuses on practical changes (De Forge and Shaw, 2012). This is very appropriate for construction management research, given that it has an inherently problem-focused orientation (Harty and Leiringer, 2007).

To summarise, the appeal of pragmatism is more about its practicality than its philosophy. Morgan (2014, p. 2) stated that it is a coherent philosophy and that "*The principles of pragmatism are indeed well-suited to problem solving as a*

human activity." For these reasons, pragmatism was adopted as the guiding worldview in this research.

5.3. The decision to adopt a mixed methods research design

A mixed methods research design was adopted during this research. In this section, the argument for its selection is presented. Additionally, the use and popularity of mixed methods research as a means of addressing research problems in extant CPS research is considered.

The problem addressed by this research is associated with issues relating to human behaviour and motivation. Love, Holt and Li (2002, p. 294) suggested that a purely quantitative approach is inappropriate for addressing research questions where "*the subject matter is no longer confined to facts but also includes the participants' perceptions*". Similarly, Amaratunga *et al.* (2002) contended that methods borrowed from the natural sciences are in themselves insufficient to solve people-related problems in built environment and construction management research.

The use of qualitative methods to investigate construction management problems was advocated over two decades ago by Seymour, Crook and Rooke (1997) in the face of the apparent prevalence of quantitative studies at that time. They criticised realist approaches that assume the people studied are passive agents and the social systems within construction projects are no more than the sum of the individuals. Their views were not universally accepted and were described in negative terms such as "*anti-scientific*" (Runeson, 1997, p. 299). At the same time, some argued that construction management researchers are not faced with a binary choice, and that paradigmatic and methodological "*monopolies*" should be broken up (Raftery, McGeorge and Walters, 1997, p. 293). Despite these debates,

over a decade later, Dainty (2009) demonstrated that construction management research was still dominated by positivism and purely quantitative approaches.

Figure 5-2 summarises the research designs adopted in the CPS articles read during the literature review. The category labels adopt the classification method used by several mixed methods advocates (e.g. Creswell and Plano-Clark, 2011). 'QUAL' refers to qualitative studies and 'QUANT' to quantitative studies. The capitalisation indicates the relative prominence of either method. For example, 'qual-QUANT' indicates a mainly quantitative methodology with an initial qualitative phase, whereas 'QUAL-QUANT' indicates a study where equal emphasis was attributed to the qualitative and quantitative phases. The terms also illustrate the order of the research phases. For example, 'QUAL-QUANT' specifies a research design involving an initial qualitative phase followed by a quantitative phase, which is the approach adopted in this research.

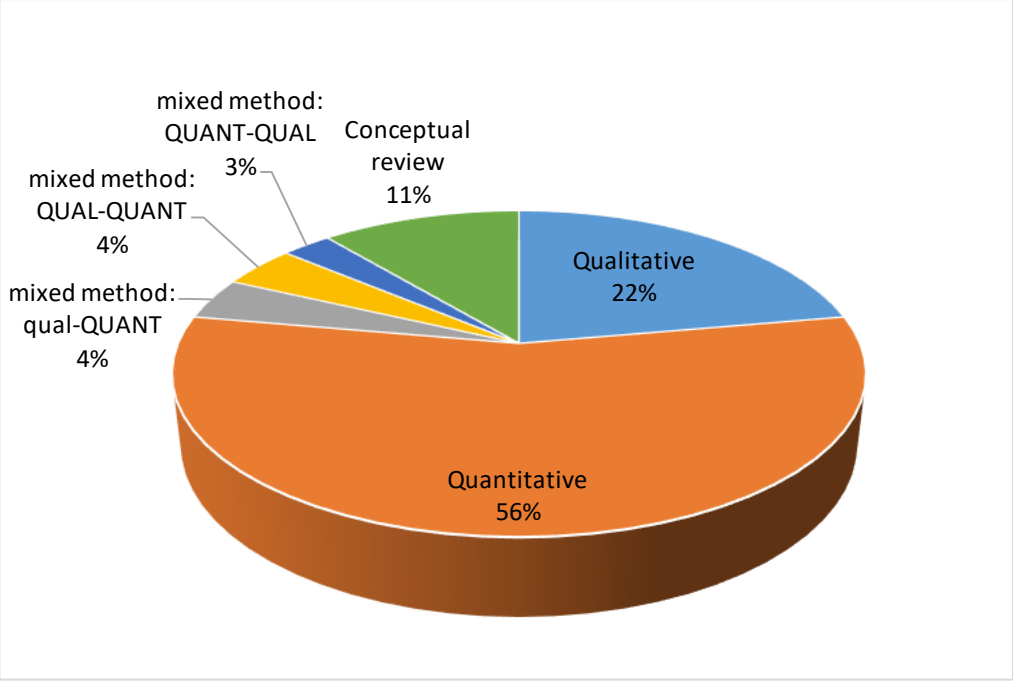


Figure 5-2. Research method designs adopted in the CPS articles reviewed.

Only 11% of the CPS articles reviewed adopted a mixed methods design. Most articles (56%) were quantitative research studies. Whilst the date of the articles was not a selection criterion, it should be noted that 50% of the CPS articles reviewed were written from 2010–2020 and 34% were written from 2000–2009. This suggests that there has not been a recent dramatic increase in the popularity of mixed methods research in construction management research.

To address the research questions in this study, a single-phase approach was considered insufficient. An initial qualitative phase of research would facilitate an initial exploration of CPS-client loyalty and establish the key-candidate loyalty antecedents. However, a qualitative study alone was unsuitable, given that one objective was to determine which of the antecedents best predicts client loyalty in the wider CPS-client population. Conversely, a purely quantitative approach would prematurely have imposed a rigid framework upon the problem.

Arguments have been made advocating the adoption of mixed methods approaches to construction management problems that focus on people-related matters (Abowitz and Toole, 2010; Ibn-Mohammed, 2017). Creswell and Plano-Clark, (2011 p. 4) defined mixed methods research as that "*in which the investigator collects and analyses data, integrates the findings and draws inferences using both qualitative and quantitative approaches or methods in a single study*". They argued that answering the research question is of ultimate importance, using whatever methods are most appropriate. Achieving this goal takes priority over any issues of ontology or epistemology. When undertaking explanatory research that seeks to explain causal processes, researchers should attempt to eliminate as many alternate possible explanations as possible (De Vaus, 2013).

In this research, the value of undertaking an initial qualitative phase of research comes from it allowing the gathering of real-world data, exploring the problem,

identifying key antecedents and removing extraneous ones. A follow-up phase of quantitative research was then used to determine the relative strength of the proposed relationships and the extent to which these findings can be generalised to the wider client population.

Combining qualitative and quantitative approaches in construction management research requires different skill sets, and it is more time-consuming. However, it improves the validity and reliability of the resulting data. It also strengthens causal inferences by providing the opportunity to observe data convergence or divergence during hypothesis testing (Mazzarol, Sweeney and Soutar, 2007). The use of two or more data collection methods, whose validity and reliability problems counterbalance each other, enables construction management researchers to "*triangulate*" their results (Abowitz and Toole, 2010, p. 111). The findings of different research phases can be compared, thereby achieving greater validity for the conclusions reached (Creswell and Plano-Clark, 2011; DiLoreto and Gaines, 2016). If the data converge to support the hypotheses, researchers can have greater confidence that the results are not spurious outcomes from one particular data-set. However, if the results of different methods diverge, this can be equally important, as it forces the re-examination of the theoretical assumptions and methods used.

Research designs that adopt an initial qualitative phase followed by a quantitative have been labelled as "*sequential exploratory*" by Creswell and Plano-Clark (2011, p. 7). However, the definition of "*quantitative follow-up*" by Morgan (2015, p. 1) is more appropriate to this research, as both phases were given equal weighting. An advantage of this approach is that researchers can use the qualitative phase to study the problem using the experiences of the participants, then conduct a follow-on quantitative phase to test the resultant theories across a wider population (Creswell, 2013).

The major themes obtained from the qualitative research were used as the quantitative study variables. The codes and sub-themes were used during the selection of scale items as closely as practicable. As Kutner *et al.* (1999, p. 1350) explained in their study, which adopted a quantitative follow-up design: "*The use of open-ended interviews to explore the important issues allows us to formulate relevant questions and discover what was truly of concern to this population*." This approach was also adopted by Williams *et al.* (2011), who used a similar methodology to investigate the causes of customer defection in the facilities management sector.

An abductive approach was taken to theory development, which is characterised by researchers who "*explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection*" (Saunders, Lewis and Thornhill, 2019, p. 153). In essence, the abductive approach is to move between observation and theory to address the research question. Abduction is appropriate to this research because it seeks to build a new theory, but by utilising existing evidence and theories as its building blocks and modifying them.

Practising a mixed methods approach offers an opportunity for doctoral researchers to develop their skills as independent researchers (Stockman, 2015). Malina, Norreklit and Selto (2011) suggested that mixed methods approaches are secretly more common than given credit for, and that much published research hides the fact that a combination of quantitative and qualitative methods was used to triangulate the findings.

A potential disadvantage to a mixed methods research design is the requirement for even greater time and resource commitments. However, the advantages were judged to outweigh the disadvantages for the purposes of this research.

5.4. Ethical approval and procedures

Prior to gathering any data or approaching the subjects, ethical approval was obtained for the proposed methodology (Appendix C). Due to the length of time elapsing between applying for ethical approval and commencing the quantitative phase of the research, the original ethical approval was resubmitted to demonstrate that the methodology for which approval had been received remained aligned with what was to be carried out. This was necessary given that the institutional guidance states that the "*ethical implications of the research should be kept under review as the project progresses, and additional ethical approval must be sought should this become necessary during the progress of the project*" (University of Wolverhampton, 2019, p. 29). The original ethical approval was sufficient, since the scope and nature of the quantitative methodology had not changed. However, as a courtesy measure, an update along with the original ethical-approval form was sent to the University Research Ethics Committee, confirming that there had been no substantive changes with ethical implications made to the original plan proposed.

Informed-consent forms for the interviews and survey phase were prepared, accounting for institutional guidance (University of Wolverhampton, 2014). All interview participants were provided with the informed-consent form prior to commencing (Appendix D). Signed copies of the form were obtained from all interview participants. In line with the institutional guidance, nothing was reported that allowed the identification of respondents. An assessment of the respondent data demonstrated a low risk of inadvertent triangulation of the interviewees from the details presented.

5.5. Reflexivity and managing personal bias

The author of this research has several decades of experience delivering technical and professional services to clients in the BES. Inevitably, this brings the risk of pre-determinism due to personal experience. Ravitch and Riggan (2016) highlighted the importance of experience, interests and goals that motivate the research in the first place. In both qualitative and quantitative research, an important consideration is the management of bias. This was defined by Maxwell (2005, p. 44) as "*what you bring to the research from your own background's identity"*. Whilst the risks of bias must be controlled for, experiential data should not be foregone. As Strauss (1993, p. 11) argued, "*Mine your experience, there is potential gold there*!"

During the qualitative data gathering and analysis, attempts were made to ensure a reflexive approach, acknowledging that qualitative research findings may be partial, partisan and anchored in their social context. "*Reflexivity*" is defined by Finlay and Gough (2008, p. xi) as "*thoughtful self-aware analysis of the intersubjective dynamics between researcher and the researched*". Key to this is highlighting the impact of motivations and attitudes on the research. Reflection in a research context is to consider the research problem thoughtfully, whereas reflexivity is concerned with questions about oneself and the impact upon the research (Hibbert, 2013). A reflexive approach requires a "*critical reflection on the research process and one's own role as a researcher*" (Braun and Clarke, 2013, p. 10). These scholars argued that reflexive considerations should be a constant process and should be interwoven into the data analysis; this approach was applied during this research.

5.6. Qualitative research methodology

5.6.1. Qualitative research methods

To achieve a depth of understanding of CPS-client loyalty and its key service-related antecedents, insight from the perspective of both clients and suppliers was necessary. Brinkmann and Kvale (2015, p. 3) stated that qualitative research is used to "*understand the world from the subject's point of view, to uncover the meaning of their experiences and to undercover their lived world prior to scientific explanation*". Guba and Lincoln (2011, p. 3) defined qualitative research as being "*interpretive, naturalistic*" research that aims to make sense of phenomena in terms of "*the meanings that people bring to them*". Creswell (2018) reasoned that qualitative research allows the exploration of social or human problems, from which a complex, holistic picture can be built. Furthermore, he argued that it is suitable for answering "*what*" or "*how*" research questions, exploring topics, identifying variables and developing theories. Qualitative methods that address construction management problems by exploring the views and opinions of participants have been criticised as being "*so subjective and so biased*" as to be "*totally useless*" (Runeson, 1997, p. 300). By way of response, Seymour, Crook and Rooke (1998, p. 110) stated that this "*leaves us asking how we might explain [phenomena] without asking those involved*!"

Surveys normally associated with quantitative approaches may be appropriate for measuring how people feel about a subject, but they are limited in helping to understand *why* they may feel that way (Morris, 2015). Hence, an initial qualitative research phase involving the analysis of semi-structured interview data was undertaken. Whilst the purpose of the qualitative analysis was to explore the phenomena of CPS-client loyalty, it was undertaken after an extensive literature review and the development of a conceptual model. Exploratory research often

involves prior engagement with extant theories and "*can even be used to identify concepts that you wish to explore in the research process*" (Saunders, Lewis and Thornhill, 2019, p. 52). In the context of this study, the purpose of the initial qualitative phase of research was theory refinement. The objective was to identify a set of key-candidate antecedents that are most likely to explain CPS-client loyalty. In line with the guidance of Malina, Norreklit and Selto (2011), the procedure was also used to achieve parsimony, by removing themes from the conceptual model that were subsequently found to have low explanatory power.

5.6.2. Semi-structured interviews

Semi-structured interviews are a powerful method of gathering data when conducted effectively. They allow researchers "*access to interviewees thoughts, reflections, memories, understandings interpretation and perception of the topic in question*" (Morris, 2015, p. 5). Interviews are an effective way of allowing researchers to examine the motivations and attitudes of participants and to gain a better understanding of built environment problems (Fellows and Liu, 2015). Braun and Clark (2013) stated that qualitative analysis using interview data is appropriate where the research question is aimed at understanding phenomena. This is particularly so where the participants have a stake or interest in the topic. Whilst the study was aimed primarily at providing guidance for CPS suppliers, most client participants clearly found the topic interesting. By way of example, following the interview request, Participant D responded to say, "*This is interesting! Just let me know when you want to conduct the interview*."

The interviews were arranged after undertaking the literature review to ensure a sufficient degree of theoretical sensitivity. A researcher's subject knowledge is important when posing second questions and following up on responses.

Table 5-1. Strengths and weaknesses of semi-structured interviews

Strengths	Weaknesses
• Access to rich personal data • Allows an understanding of context and motivations • Allows for probing and following up • Freedom for interviewees to reveal issues important to them • Versatility • Allows observation of non-verbal information (intonation and body language)	• Possibility of deliberately, or inadvertently, inaccurate data • Impossible to conduct random sampling • Findings cannot be generalised to the entire population • Time and effort to set up interviews • Time-consuming or expensive transcription

The interview questions were checked to ensure that they were easily understandable and free of academic jargon. Brinkmann and Kvale (2015) stressed the importance of ensuring the comfort of the participants. The feedback and body language of the participants were monitored during interviews. They appeared to enjoy the process, with many commenting at the end that it had been useful to them as a reflection exercise. One participant appeared slightly anxious at being unable to articulate their feelings when responding, but was reassured to the contrary, resulting in an equitable outcome being achieved.

The interviews were conducted face-to-face. For expediency, they were carried out within one-hour appointments, given that the participants were generally time-deficient. The efficacy of interviewing as a method of gathering data has been criticised due to alleged differences between what people say and what they do (Hammersley, 2003). To overcome this, the participants were reassured about the anonymity of their responses. In order to receive candid feedback, attempts were made to come across as non-judgemental. The interviews opened with simple starter questions to establish rapport, and 'drilled down' into more detail before moving to a subject-related, "*grand tour*" question (Morris, 2015, p. 45).

5.6.3. Interview pilot study

A pilot interview was carried out with a volunteer colleague. This led to the refinement of the interview guide, including removing some overlapping and repetitive questions. The original guide contained certain questions about the nature of commitment and loyalty. These were removed from the final guide as feedback obtained from the pilot study suggested that they were inappropriately conceptual and unlikely to lead to useful responses.

5.6.4. Sampling of interview subjects

The interviews were undertaken initially using purposive sampling, with individuals selected based on their direct experience of the phenomena of interest (Creswell and Plano-Clark, 2011; Creswell, 2013). As explained by Marshall (1996 in Morris, 2015, p. 63) "*some informants are 'richer' than others and […] these people are more likely to provide insight and understanding for the researcher*". To provide a rounded experience, the subjects were chosen from both sides of the relationship dyad, with experienced clients and CPS suppliers involved. The main selection criterion was that the prospective participant either had experience as a client or a supplier of CPS within the UK Midlands. This was qualified by confirming the participant's experience at the start of the interview and explaining the scope of the research.

Prospective participants were identified initially using leads generated from individuals within the researcher's professional network. After the initial interviews, the sampling methods changed to a 'snowballing strategy,' with the additional contacts provided by participants. Bias resulting from the existence of contracts between clients and CPS suppliers anchoring relationships was controlled for. Where participants expressed feelings of constraint, this was explored to ensure

that this was not merely an artefact of a contractual obligation. Where there was a contract in place between the client and supplier, the data were not discounted if the subject professed that they had influence in the re-procurement decision. All participants confirmed that they had experience in either delivering CPS or acting as a client to a CPS supplier.

In qualitative research, the number of interview participants can vary from one to two people in narrative studies to as many as ≥30 as required to reach saturation in the case of grounded theory. In TA, there are no set rules for the number of subjects. Braun and Clarke (2013) deemed six to 10 interviews to be sufficient in most cases. However, they advise that researchers conduct 15-30 interviews if they are aiming to identify patterns across the data. For this reason, a target of 20 interviews was set.

It was decided to interview subjects from both sides of the client-CPS-supplier dyad. Clients were deemed to be the richest source of data, given that, in well-functioning markets, they are generally the decision-makers regarding the continuation or termination of the supply relationship. However, experienced CPS suppliers were also included in the qualitative research phase, due to the insights that they were expected to offer. The target number of participants was met, with interviews being held with 20 people (Table 5-2). Following completion of the initial 20 interviews, an assessment of the data was undertaken to determine if sufficient saturation had been achieved. At this point, the themes and sub-themes were well developed. Enough evidence had been obtained during the pattern analysis to determine the degree of association between the antecedent and loyalty themes. Therefore, no additional interviews beyond the target of 20 were considered necessary.

Regarding the sample demographics, 20% of interview participants were women. This is deemed as sufficiently representative of the working population, given that

women currently comprise ~14% of the construction workforce (Powell, 2019). All but two of the participants were educated to undergraduate degree level. Of the participants, 20% were CPS suppliers, with the remaining 80% working in a client role. All the supplier participants were members of a CPS professional body. Of the client-side participants, 69% were professionally qualified, with 43% being members of a CPS professional body.

Table 5-2. Interview participant information

Identifier	**Interview date**	**Job title**	**Demographics**	**Experience**
Participant A	27/04/2018	Estates manager	Male. Undergraduate degree qualified. Professionally qualified. Member of the Institute of Electrical Engineers.	25 years' experience of managing public sector estates and facilities. No private sector experience.
Participant B	27/04/2018	Developments manager	Male. Undergraduate degree qualified. Professionally qualified. Member of the Royal Institution of Chartered Surveyors (RICS)	10 years' experience of managing construction projects in the public sector. 26 years' experience in private practice as a surveyor and project manager.
Participant C	03/05/2018	Project manager	Male. Undergraduate degree and MSc qualified.	15 years' experience of managing construction projects in the public sector. 10 years' experience in private practice project management. 10 years' experience of building contracting.
Participant D	04/05/2018	Firm director	Male. Undergraduate degree qualified. Professionally qualified. Member of the RICS	33 years' experience in private practice as a surveyor. No public sector experience.
Participant E	12/06/2018	Developments manager	Male. Undergraduate degree and MSc qualified. Professionally qualified. Member of the	8 years' public sector experience. 18 years' experience in private practice as an architect and project manager.

Identifier	Interview date	Job title	Demographics	Experience
			Royal Institute of British architects (RIBA).	
Participant F	15/06/2018	Project manager	Male. Undergraduate degree qualified. Professionally qualified. Member of the RICS.	18 years' experience in managing construction projects in the public sector. 8 years' experience in private practice as a general practice surveyor and project manager.
Participant G	18/06/2018	Director and property developer	Male. Undergraduate degree qualified.	17 years' estate manager and property developer experience.
Participant H	20/07/2018	Property manager	Female Undergraduate degree qualified. Professionally qualified. Member of the RICS.	7 years' experience managing property and facilities in the charity sector. 16 years' general practice surveyor experience.
Participant I	26/09/2018	Estates surveyor	Male. Undergraduate degree qualified.	31 years' experience in managing property in the housing sector. No private sector experience.
Participant J	31/10/2018	Firm partner	Male. Undergraduate degree qualified. Professionally qualified. Member of the RICS.	15 years' private practice surveyor experience.
Participant K	15/11/2018	Firm director	Male. Undergraduate degree qualified. Professionally qualified. Fellow of the RICS.	15 years' infrastructure construction and surveying experience. 10 years' private practice surveyor experience.
Participant L	09/11/2018	Housing and corporate asset manager	Female. Undergraduate degree qualified. Professionally qualified. Member of the RICS.	10 years' private practice surveyor experience. 23 years' local authority property management experience.
Participant M	09/11/2018	Deputy housing manager	Male. Undergraduate degree qualified.	3 years' construction industry experience. 8 years' local authority property management experience.

Identifier	Interview date	Job title	Demographics	Experience
Participant N	19/10/2018	Compliance manager	Male. Level 6 (diploma) qualified. Professionally qualified. Member of the Institute of Occupational Safety and Health	25 years' facilities management and compliance experience.
Participant O	19/10/2018	Deputy facilities manager	Male. BTECH qualified.	12 years' facilities management experience.
Participant P	14/11/2018	Facilities manager	Male. MSc degree qualified.	23 years' facilities management and compliance experience.
Participant Q	15/11/2018	Project manager	Male. Undergraduate degree qualified. Professionally qualified. Member of the RICS.	15 years' private practice surveyor experience. 20 years' public sector project manager experience
Participant R	22/11/2018	Developments manager	Female. Undergraduate degree qualified.	12 years' public sector experience, the most recent 6 include experience in managing the funding of construction projects
Participant S	23/11/2018	Project manager	Male. Undergraduate degree qualified. Professionally qualified – Chartered Engineer	20 years' engineering experience. 20 years' public sector experience.
Participant T	26/11/2018	Business director	Female. Undergraduate degree qualified. Professionally qualified. M Member of the Association of Accounting Technicians	20 years' private sector construction industry experience.

5.6.5. Interviewing methods

The interview method involved asking a set of pre-prepared questions and following up on responses from interviewees. It was important to gain the participants' trust, probing when appropriate and avoiding unnecessary interruptions. The interview guide (Appendix E) was prepared using the guidance

of Creswell (2013) and Morris (2015). Efforts were made to ensure it was not so detailed that it would limit interviewee digressions, whilst not being so sparse as to risk missing important details. Space was added to the guide to facilitate field notes. Observations of non-verbal communication and 'hunches' during interviews were also recorded. The questions were designed to be short, understandable and devoid of academic language. Direct conceptual questions were avoided, in line with the advice of Brinkmann and Kvale (2015). The research questions were used as an *aide-memoire*, with many questions framed as 'how' or '"what. Questions framed with the interrogative word "*why*" were used sparingly and were not used as openers. These are more challenging to answer and are generally the responsibility of the researcher to ascertain rather than for the participants to answer. As Brinkmann and Kvale (2015) stated: "*a doctor does not start by asking a patient why they are sick but rather asks […] what is wrong […] what he or she is feeling and what the symptoms are"*, before making an informed diagnosis based on the evidence.

Interview subjects were informed that the conversation would be recorded and used as part of the analysis, with any names and identifiers anonymised during transcription. The objectives of the research were introduced at the start of the interview, using the notes in the consent form as a guide. The concept of CPS was explained in simple terms using the CIC (2008) definition. Whilst participants were unfamiliar with the initialism "CPS", all seemed to understand intuitively what was meant when it was explained in context with the sub-professions. The client-side participants were asked to only talk about their CPS suppliers when responding to the questions.

The statements were checked using interviewee feedback to ensure an accurate interpretation of responses. The guidance of Morris (2015) was followed, with the aim to probe rather than cross-examine, and to enquire rather than challenge. To

reduce bias as far as possible, leading questions were avoided. The interviews began by asking broad questions, then narrowing down the themes, sub-themes and the associations between them. No *a priori* themes or theories were raised first by the researcher. However, if participants provided data that appeared to support a theory or mentioned an *a priori* theme, the researcher used the opportunity to probe and develop its meaning fully. The mean interview length was 52 minutes. All interviews were recorded using the Voice Record Pro IOS app. Recorded conversations were then uploaded immediately to the researcher's secure data storage facility and deleted from the original recording device.

5.6.6. Interview-data transcription

Whilst being apparently straightforward, transcription methods should be chosen with care and used diligently, given the impact that this can have on the data obtained and the subsequent conclusions. The orthographic transcription technique was used, as defined by Braun and Clarke (2013, p. 162). This involves making "*a thorough record of the words spoken*". Speech and non-semantic sounds were transcribed without correcting or cleaning up. Whilst unsuitable for use in methods such as transaction analysis, orthographic transcription was sufficient for TA, since the aim was to identify themes and patterns in the data. All transcriptions were made by the author, who typed them up whilst listening to the file recordings on playback. Although time-consuming, the recordings were self-transcribed to ensure accuracy and to begin informally analysing the data. Following transcription, data were validated by replaying the recording whilst reviewing it against the written record. This resulted in minor edits being made, mainly due to punctuation, so that the transcription was a better match against the words spoken. Table 5-3 provides a key to the notation used in the transcripts from which data extracts are drawn and presented in Chapter 6.

Table 5-3. Transcription notation

Notation	**Meaning**
(.)	Short pause.
((pause))	Long pause.
((laughs))	Participant laughter.
((general laughter))	Both participant and researcher laughing.
[…]	Less-relevant text in the data extract between […] was omitted for brevity purposes.
[company name]	Anonymised text between [ ] square brackets replaces that which may identify people or organisations. The notation was used for absolutely necessary grammatical corrections within the text for clarity.
"He said, 'Not a chance,' when I asked him."	Text between inverted commas, such as 'Not a chance' in the example, is reported speech.
<*explanatory text*>	Researcher's text added to denote the subject matter the participant was discussing.

5.6.7. Qualitative data analysis method selection.

Prior to undertaking interviews, key sources of qualitative analysis guidance were consulted to determine the most appropriate method for this study. These included Maxwell (2005); Creswell (2013); Charmaz (2014); Marshall and Rossman (2014); Miles, Huberman and Saldana (2014); and Corbin and Strauss (2015). Following a review of the available methods in context with the study objectives and worldview assumptions, TA (as defined by Braun and Clarke (2013), was selected.

TA was first branded as a method in its own right by Braun and Clarke (2006). Several advantages of using it in this research were identified. In common with other related methods, its principal use is to explore themes and patterns across qualitative data in relation to a research question. Unlike other qualitative analysis techniques, such as constructivist grounded theory (Charmaz, 2014), it is not bound to a particular ontology or epistemology. Furthermore, TA is a flexible and accessible technique. Given that this research was theory driven, 'theoretical' TA was used. Using this form, researchers are guided by existing theories and concepts (Braun and Clarke, 2013, p. 178).

5.6.8. The process of qualitative data analysis

Throughout the qualitative research phase, a diary was maintained in NVivo 11. On each working day, a summary of emergent thoughts was written so that insights could be retained and revisited during data analysis. Unlike quantitative data analysis, there is no clear delineation between analysis and writing-up when undertaking qualitative research.

In accordance with the guidance of Tufford and Newman (2012), mental bracketing was used to mitigate the potentially deleterious effects of preconceptions that could have biased the analysis. This required consciously recognising and setting aside prior assumptions and interpreting the participants' accounts with an open mind. It involved writing memos during data collection and analysis and reflecting on the decisions made and if any preconceptions had influenced decision-making during the analysis process.

Prior to the analysis, a set of theory-derived codes was produced in NVivo 11, ready for mapping should evidence arise. The interview transcripts were read in full and informal memos written to describe patterns in the data. Following reading and familiarisation, systematic analysis of the data began. The initial part of this

process was coding, by identifying aspects of the data that related to the research questions. Data-derived (semantic) codes were developed to mirror the participants' language and concepts. Researcher-driven (conceptual) codes were created that related to the conceptual framework.

The frequency with which codes appear in the data is relevant, but in contrast with quantitative research, it is not of overriding importance in qualitative research. However, TA has been associated with the application of code-frequency counts as a means of determining prevalence (e.g. Broad, 2012). A middle-ground position between the inclusion of code-frequency counts and their exclusion l was adopted in this research, in line with Braun and Clarke (2013). This involved qualifying the language when discussing the data to indicate the strength or consistency of themes and sub-themes. Therefore, within this study, where the term 'most' is used, this refers to ≥15 of the 20 interview subjects. Where the term 'many' is used, this refers to between 10-14 participants. Where the term 'occasionally' or 'some' is used, this refers to <10. The term 'a minority of' or 'a few' refers to three participants or fewer. When writing up the analysis, sufficiently vivid illustrative quotes were included to support the assertions made.

5.6.9. Linking qualitative with quantitative research

Following the completion of the qualitative analysis, a follow-up phase of quantitative research was conducted. Saunders, Lewis and Thornhill (2015, p. 162) defined quantitative research as that which "*examines relationships between variables, which are measured numerically and analysed using a range of statistical techniques*".

The qualitative research informed the subsequent quantitative research. Assisted by the guidance of Creswell and Plano-Clark (2011), the data were used to develop a questionnaire to test the relationships identified within the wider CPS-

client population. Firstly, the qualitative findings were used to refine the conceptual model. For validity purposes, only major themes and relationships found in many, most or all respondents' interviews were included in the refined model. Secondly, the themes, sub-themes and insights gained from the qualitative phase of research were used to develop the survey instrument. Each theme was explored to determine its composition and nature in a CPS context. The themes and their sub-themes were converted into variables for quantitative analysis. The insights gained were used during the selection of the survey items used to define each of the variables.

5.7. Quantitative research methodology

5.7.1. Quantitative research design

A quantitative follow-up phase of research was necessary to be able to assess the extent to which the findings of the qualitative phase could be generalised to the CPS-client population in the Midlands. It was also required to determine which of the service-related antecedents most strongly predicted client loyalty, to address Research Question 2.

A cross-sectional survey method was selected as it is a convenient, relatively low-cost method of obtaining data from many people across a wide geographical area (Nardi, 2006; Denscombe, 2007). It allows researchers to examine relationships between predictor (independent) and outcome (dependent) variables as they exist in a defined population at a single point in time. A key advantage of this approach is one of expediency, as data can be gathered over a comparatively short period of time. However, there are limitations associated with cross-sectional surveys in terms of proving causation.

It has long been understood that mere correlation is not in itself evidence of causation. The philosopher and scientist David Hulme (1748, in Field, 2018) established three key principles from which to infer cause and effect: (1) the cause and effect must occur close together in time; (2) the cause must occur before an effect does; and (3) the effect should never occur without the presence of the cause.

In a cross-sectional survey, the predictors and outcomes are measured simultaneously. Therefore, it is difficult to determine whether the supposed cause preceded the effect. Pallant (2016) highlighted the potential issue with a third variable impacting on observed phenomena. To rule out the "*confounding variable*" risk, John Stuart Mill (1865, in Field, 2018) stated that the effect should be present when the cause is present, and that when the cause is absent, the effect should be absent also. Arguably, the most robust way of evidencing causation would be to use an experimental method in which the researcher adjusts the predictor variable and examines its effect on the outcome variables in comparison to a control group. Such an approach would have involved attempting to manipulate real-world relationships between CPS and their clients, which is neither ethical nor practically viable.

Longitudinal surveys are advantageous as (in common with cross-sectional approaches) they are observational and do not require the researcher to manipulate the variables. The researcher conducts several observations of the same subjects over time, allowing them to establish a sequence of events that is necessary to make claims about causation. However, insufficient time within the research programme was available to undertake a longitudinal study. Therefore, any statements in this thesis regarding the implied causal mechanisms of service-related antecedents impacting on CPS-client loyalty should be understood in context with the limitations of the methodology.

The unit of observation is the object about which information is collected during research. In the quantitative phase of research, the unit of observation was the client(s) of CPS suppliers operating in the Midlands. In contrast, the unit of analysis is the phenomena that the researcher intends to learn about during the process. In the case of this research, the unit of analysis was the CPS supplier-client service relationship.

5.7.2. Questionnaire design

A self-report questionnaire (Appendix F) was used as it offers an objective means of collecting information about people's knowledge, beliefs, attitudes and behaviour. Despite the popularity of questionnaires in the built environment and wider fields of research, "*no single method has been so abused*" (Boynton and Greenhalgh, 2004, p. 1312). Poorly designed questionnaires lead to low response rates and poor-quality data. They also risk Type I errors (rejecting a true null hypothesis or 'false positive') or Type II errors (failure to reject a false null hypothesis or 'false negative') (Podsakoff *et al.*, 2003). It was therefore necessary to plan questionnaire design meticulously, including the pre-testing and pilot-testing phases. Attention was paid to minimising the risk of bias and measurement error. All multivariate data techniques must be assumed to have some degree of measurement error or "*noise,*" together with the "*true*" level comprising that which is observed (Hair *et al.*, 2014, p. 7). Therefore, the focus was placed on reducing the adverse impacts of measurement error on results.

To minimise non-response bias, a cover letter was included. This was designed to be informative and spark respondents' interest to encourage participation. The cover letter explained the purpose of the survey, the risks and how the respondent was selected, and gave assurance of confidentiality. The identities of the researcher and the academic institution were provided, along with information on

how data would be used. An informed-consent sheet was included to confirm the respondent's express agreement to participate.

Efforts were made to reduce the psychological cost of completing the survey by making the question phrasing easy to understand and including as few items as necessary to capture the essence of the constructs. Questionnaires that are overly long can lead to response bias, given that respondents will vary in their willingness to read and complete them (Czaja and Blair, 2003). A balance was reached in terms of the number of items necessary to capture the constructs with brevity, so as not to affect the response rate adversely. Shading was added to intermediate rows within the questionnaire to enhance readability, thereby reducing response error. A closed-questionnaire design was used to obtain data suitable for statistical analysis. Additionally, in line with the suggestions of Fellows and Liu (2015), an optional free-text box was included at the end to gather any thoughts or opinions respondents had about the issue of CPS-client loyalty.

When designing surveys, steps should be taken to avoid the various sources of respondent psychological biases. These include the 'consistency effect' bias resulting from people providing erroneous responses due to their desire to appear rational, and 'social desirability' bias resulting from people wishing to portray themselves favourably. Researchers should also be cognisant of "*leniency bias,*" whereby respondents portray others more favourably than they feel they should (Podsakoff *et al.*, 2003, p. 881). To minimise these causes of bias, guidance text was included, which had been designed to encourage respondents to answer according to their true feelings, irrespective of whether their experience of the last CPS supplier was good, fair or bad.

The questionnaire was designed to minimise central tendency bias by the inclusion of breaks in question banks. The aim of these was to retain engagement, whilst making wording as clear as possible to minimise cognitive fatigue.

Measures to reduce ‘acquiescence’ bias included avoiding leading questions or making suggestions as to how the item should be answered. Social desirability bias was addressed by stipulating the anonymity of the responses, so that respondents were not disinclined to express negative attitudes towards their service providers. Items were designed to be as concise as possible using simple, unambiguous language (Nardi, 2016).

The use of negatively worded items or ‘cognitive speed bumps’ are commonly used in questionnaires to minimise the risk of participants slipping into automatic response patterns (Podsakoff *et al.*, 2003, p. 884). However, Robinson (2018) argued that the benefits associated with the use of negatively worded items do not outweigh the undesirable effects, particularly where the sample population is likely to be engaged and informed. In view of this, a balanced approach was taken with the inclusion of only two negatively worded items in the questionnaire.

Podsakoff *et al.* (2003, p. 882) suggested that “common rater effect” bias can be reduced by the temporal separation of data collection for predictor and outcome variables. However, obtaining two separate completed questionnaires from respondents was impracticable. To reduce the impact of implicit theory bias (where the respondent consciously or subconsciously aims to guess a correct answer), the aims of the study were stated in broad terms, with no details about the specific hypotheses being tested.

Indicators are single question items used in conjunction with others to form a composite measure (Hair *et al.*, 2014). Using multiple indicators in the form of psychometric scales helps capture the complexity of studied concepts. The use of multiple items in a scale is necessary for capturing the essence of the construct and for allowing the assessment of internal reliability (Field, 2018; Robinson, 2018). Using multi-item scales reduces the impact of error where a question is misinterpreted (De Vaus, 2013).

The design used for the questionnaire was a Likert scale, including a neutral midpoint with response points on either side and anchor text items that were exact antonyms (‘disagree’ and ‘agree’). The response boxes two points away from the midpoint retained these antonyms, but with an identical adverb (‘strongly’) added. Such a design facilitates linguistic and spatial symmetry, thereby reducing response error. An examination of the literature reveals that Likert scales have been used with as few response points as three and as many as 11. Five- or seven-point response scales are optimal in terms of response reliability and criterion validity (Robinson, 2018). Therefore, a seven-point response scale was used, which is optimal for professional respondents who are likely able to interpret a certain degree of response complexity. The verbal anchors ascended from left to right with respect to the level of agreement with the rated variable, which was considered the most intuitive layout.

Four or five items is an ideal number for representing latent constructs (Gaskin, 2018). However, other similar studies developed reliable constructs represented by fewer than four items (e.g. Caceres and Paparoidamis, 2007; Cater and Zabkar, 2009; Anaza and Rutherford, 2014). Scales with at least four items per construct were used to minimise the negative consequences of dropping individual items where necessary during factor analysis and reliability testing.

5.7.3. Scale-item selection and instrument design

The literature review demonstrates that the antecedents were operationalised in various ways in extant studies. Therefore, in line with the guidance of Creswell and Plano-Clark (2011), and Robinson (2018, p. 742), scales from other professional service articles were selected based on their ‘conceptual fit’ to the themes identified during the qualitative phase. The reuse of scales found in journals is acceptable academic practise, assuming that references to the original article(s)

are stated clearly (Pallant, 2016). An advantage of this approach was that the scales had been tested for validity and reliability in other professional service contexts.

Some wording modification to certain items was necessary to make them more specific to a CPS context. This is considered acceptable practise if the statement in the question remains related to the same domain, and the validity and reliability testing are re-assessed (Robinson, 2018). The key service-related antecedents were positioned as the independent (predictor) variables. Affective commitment, locked-in commitment and value-based commitment were operationalised using adapted items from Sharma, Young and Wilkinson (2015). The affective commitment scale item relating to concern for the other party was dropped, as the qualitative analysis findings suggested that this is more associated with trust in a CPS context. Locked-in commitment was operationalised to avoid responses being biased by contractual obligations.

A small number of additional items were added to represent the findings of the qualitative research. An item from Chang *et al. (*2012) was added to the locked-in commitment scale. This was necessary to account for the perceived risks involved with changing suppliers, which was identified as being important to clients during the qualitative research phase. An item relating to the frequently occurring sub-theme ‘value for money’ was added to the value-based commitment scale. Trust was operationalised using an adapted scale from Doney and Arnott (2007). An item from Chang *et al. (*2012) was added to represent the confidence aspect of trust identified during the qualitative research phase.

Functional quality, technical quality and communication quality were operationalised using scales adapted from Sharma and Patterson (1999). Technical quality was based on the core service and quality of advice. In light of the qualitative analysis findings, an item was added representing meticulousness

from the CPS study of Prakash and Phadtare (2018). Functional quality included an item representing flexibility, which was considered important by respondents in the qualitative research and in other professional service studies (Bagdoniene and Jakstaite, 2009; Cater and Cater, 2010).

During the literature review, cross-over was identified in the use of measures for communication quality and functional quality, such as timeliness. By way of example, Sarapaivanich and Patterson (2015) applied timeliness measures to the items of both communication quality and process (functional) quality in the same study. In this research, timeliness was conceptualised as an aspect of functional quality, whereas communication quality was associated with aspects of personal interaction. Similarly, the affective measure of "*care and interest in my personal circumstances*" used by Sharma and Patterson (1999) for functional quality was dropped as it was too close to the operationalisation of trust in this study.

It has been debated whether service quality should be measured via "*perceptions versus expectations*" or "*perceptions only*" (Parasuraman, Zeithaml and Berry, 1985; Cronin and Taylor, 1994). The decision was made to continue using "*perceptions only*" survey items, as this is the most appropriate approach when the primary purpose of measuring service quality is to measure variance in a dependent construct (Zeithaml, Berry and Parasuraman, 1996).

The dependent (outcome) variables were repatronage and PWOM. Repatronage was operationalised using items from Molinari, Abratt and Dion (2008), and Cater and Cater (2010) that had been previously tested in professional service contexts. PWOM was operationalised using an adapted scale from Cater and Cater (2010). The PWOM and repatronage items were temporally consistent (forward-looking) except for the two reversed items, the adjustment of which resulted in them being phrased in the present tense. Items with directly opposing temporal positions (backward-looking versus forward-looking) in the same construct were avoided, in

line with the recommendations of Watson *et al.* (2015). Whilst the item with the wording "*This supplier is our first choice for this type of service*" is arguably attitudinal, it was retained in the repatronage item battery on the basis that it would capture an attitude elucidating a client's behavioural intentions. Furthermore, it was classed as a repatronage intention item by Lam *et al. (*2004) and shown to have discriminant and convergent validity with other repatronage items in a business-to-business services context (Cater and Cater, 2010).

The questionnaire was in three parts. Part A was the informed-consent confirmation. Part B requested basic personal information. Potentially intrusive questions (e.g. name, age and income) were avoided to reduce the risk of non-response bias. However, the questionnaire did include a section designed to find out which sector the client worked in using the list of UK business sectors listed by the Office for National Statistics (2018b). Part C contained the Likert scale questionnaire section designed to test relationships between predictor and outcome variables.

The instructions on the questionnaire asked participants to consider the CPS supplier that carried out their most recently completed project or service commission as a frame of reference when responding to the survey. The rationale for this is that their views on and attitudes to the supplier would be fresh in their minds, minimising response error. Furthermore, many performance-related measures in construction services are outcome dependent and retrospective (Dainty, Cheng and Moore, 2003). Such an approach was adopted in similar studies from other professional fields (e.g. Sarapaivanich and Patterson, 2015; Cater and Zabkar, 2009).

5.7.4. Quantitative research validity and reliability

In quantitative research, reliability and validity are important in demonstrating the value of the findings. Reliability is the degree to which a variable or set of variables is consistent in what it intends to measure (Hair *et al.*, 2014). Reliable measures will show greater reproducibility if/when repeated than unreliable measures. It was not practicable to re-contact respondents to ask them to complete the same questionnaire twice as a way of determining test-retest reliability. Furthermore, such a method can lead to artificially inflating the apparent reliability of the measures (De Vaus, 2013). An alternative means of testing reliability is to consider the consistency of case responses to an item compared to the responses to each other item (item-item correlations). Cronbach's α, which is a statistical test of internal consistency that provides an overall reliability measure for a scale, was used. It facilitates the identification of unreliable items, allowing them to be dropped to increase overall scale reliability. As a rule of thumb, the α-value should be at ≥0.7 to demonstrate sufficient scale reliability (De Vaus, 2013; Pallant, 2016). This was tested using Statistical Package for Social Sciences (SPSS) v.24.

In simple terms, validity is "*the degree to which a measure accurately represents what it is supposed to*" (Hair *et al.*, 2014, p. 7). Content validity (also known as face validity) was addressed initially during qualitative research. This is the degree to which the items correspond to the concept being measured. The themes within the conceptual framework were explored to determine what they mean to participants. These findings were then used to select the previously validated scales from the literature that had the best conceptual fit. A round of content validity testing was undertaken during pretesting on the items representing the constructs. To determine if the items were representative of the constructs, the scales were reviewed by the supervisory team and with some of the original

participants who had been interviewed during the qualitative research phase. Construct validity is the degree to which the scales measure the intended variable (Nardi, 2006). Failing to use a questionnaire with sound psychometric properties reduces the validity of the results, as the constructs may not be measuring what the researcher believes they are measuring. Steps were taken to ensure construct validity; these included the use of scales tested in similar populations, a research-orientated review, and pre-testing followed by pilot testing, amending the questionnaire where necessary.

Dimensionality is the degree to which items in a scale represent a single concept (Hair *et al.*, 2014). Factor analysis was used as an empirical assessment of the degree to which the scale items were unidimensional and therefore demonstrative of factorial validity (Field, 2018). This is necessary when measuring underlying or 'latent' variables that cannot be observed directly. By providing an empirical estimate of the structure of the variables considered, factor analysis was used on an objective basis for creating summated scales. Following the development of a factor solution, predictor and outcome variables were created using the compute variable function in SPSS v.24 to create their summated scale scores. These were used in the subsequent hypothesis testing using multiple regression analysis.

5.7.5. Pre-testing

The draft questionnaire was subject to a research-orientated review with input from the supervisory team. This was necessary to confirm that it would generate usable data for the purposes of hypothesis testing. It is robust academic practice to check the reliability, validity and appropriateness of a scale before testing it in a different population (De Vaus, 2013). Following discussions and feedback from the supervisory team, the final scales selected and the modifications made were

deemed to have sufficient face validity with respect to the representativeness of the constructs to be measured.

The results of pre-testing led to the inclusion of additional questions in Section A. These were designed to gather more information about the respondents to assist with the subsequent interpretation of results. They included questions about the size of the respondent's employing organisation and the frequency that they dealt with CPS suppliers. Minor amendments were also made to the item wording in Section B to ensure that the language used was as simple and intelligible as possible. The words 'always' and 'never,' which were originally present in one item each, were removed on the basis that Nardi (2006) advises against their use in psychometric scales.

5.7.6. Pilot testing

In line with the guidance of De Vaus (2013) and Nardi (2016), prior to the main sampling exercise, the questionnaire was pilot tested within a smaller sub-sample population. The purpose of the pilot study was to check that the means of data collection was effective and that the resulting data from the main study would be suitable for analysis, thus serving to address the research questions. The processes of sampling, administration, data collection and analysis were simulated as far as practicable.

The pilot testing involved examining response patterns and gathering feedback from participants. Pilot testing is more intensive for those taking part, and it requires researcher feedback and the completion of the standard question sets. The resultant data were examined for missing responses, with the aim of rectifying any issues (such as ambiguous question wording or contentiousness) that could lead to problems with the main survey data. The researcher-feedback questions in

the pilot study were designed to ascertain how long it took the respondents to complete the questionnaire and to check that they understood the questions. The sample used in the pilot test was drawn from the database of CPS clients prepared for the main study, with pilot-test participants selected at random. It also included the participants from the qualitative research phase. Questionnaires were sent to 50 respondents.

5.7.7. Pilot-test response characteristics

In total, 15 responses were returned from the 50 respondents, representing a response rate of 30%. A smaller number of responses is considered acceptable for pilot testing compared to the main research phase (De Vaus, 2013). Whilst the larger the sample, the better, a pilot-test sample size of between 12-50 respondents is considered sufficient (Nardi, 2006). The sample included respondents working in a range of sectors, including construction, healthcare, wholesale, public administration and property (Figure 5-3). It was dominated by experienced clients, with 67% having worked with CPS suppliers for ≥20 years (Figure 5-4). Most respondents stated that they used the services of CPS suppliers routinely during the course of their work (Figure 5-5). With the exception of planning consultants, all CPS sub-professions had delivered to at least one of the pilot-study respondents (Figure 5-6). Some 27% of respondents reported that their supplier delivered more than one type of CPS.

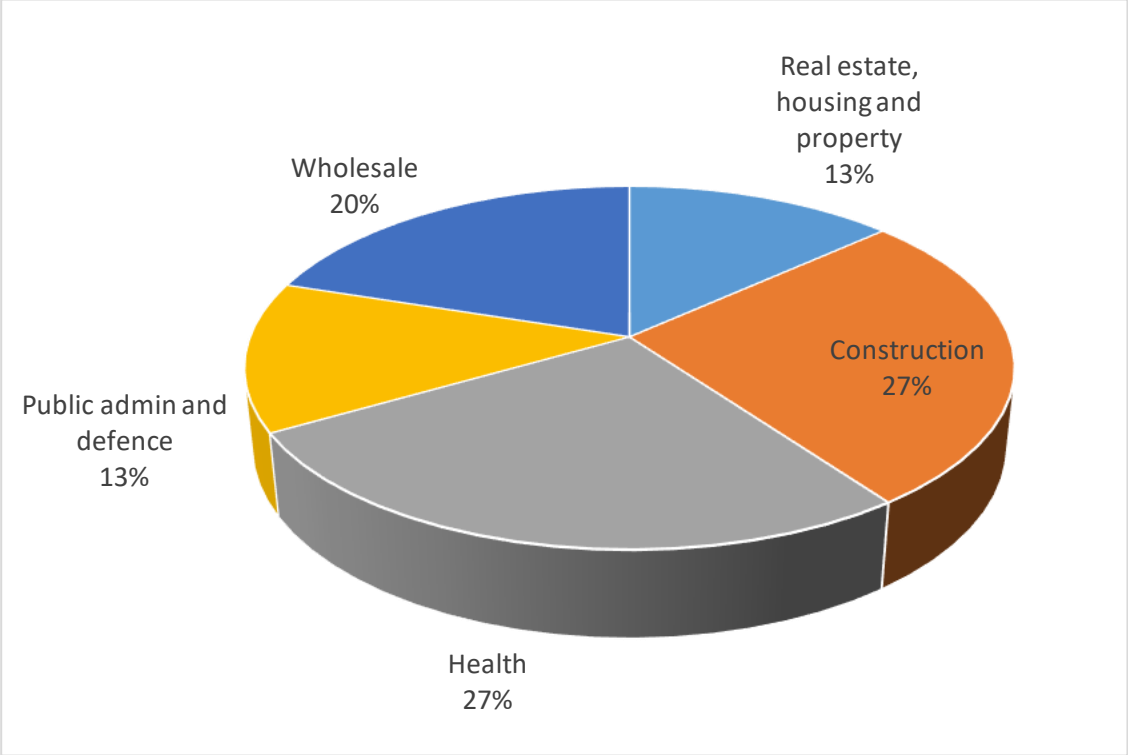


Figure 5-3. Chart showing the sectors represented by pilot-study respondents.

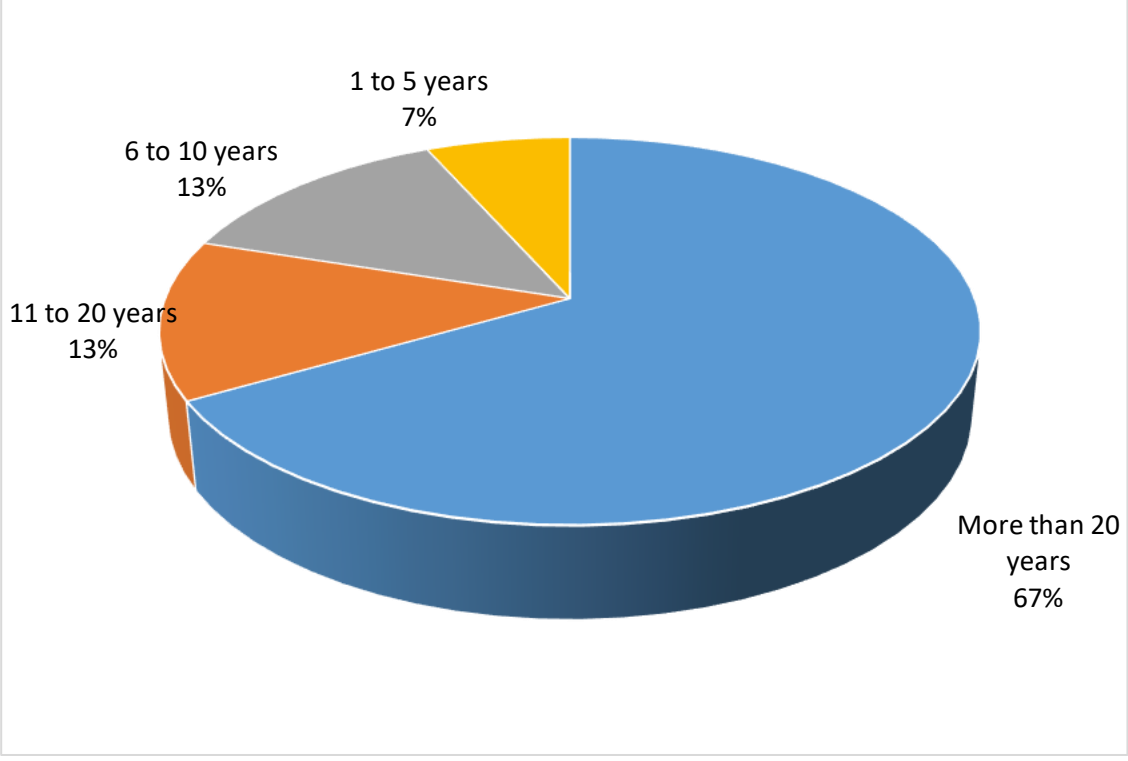


Figure 5-4. Pilot-study respondents' degree of experience.

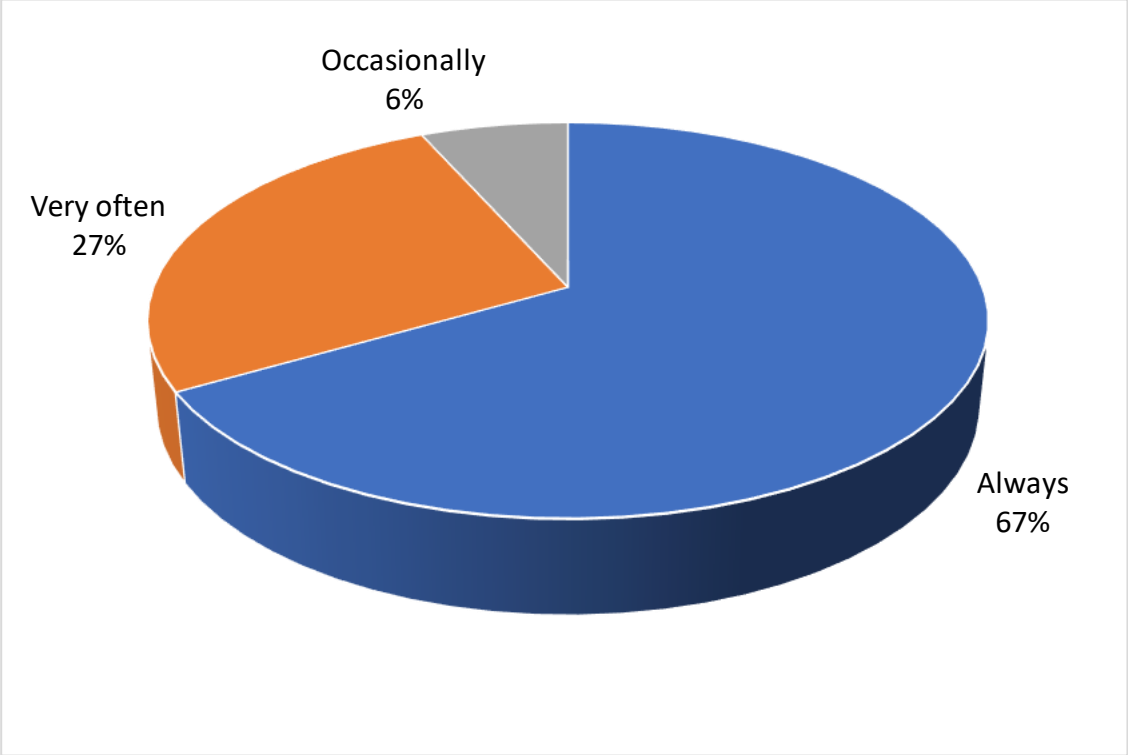


Figure 5-5. How often respondents used CPS suppliers.

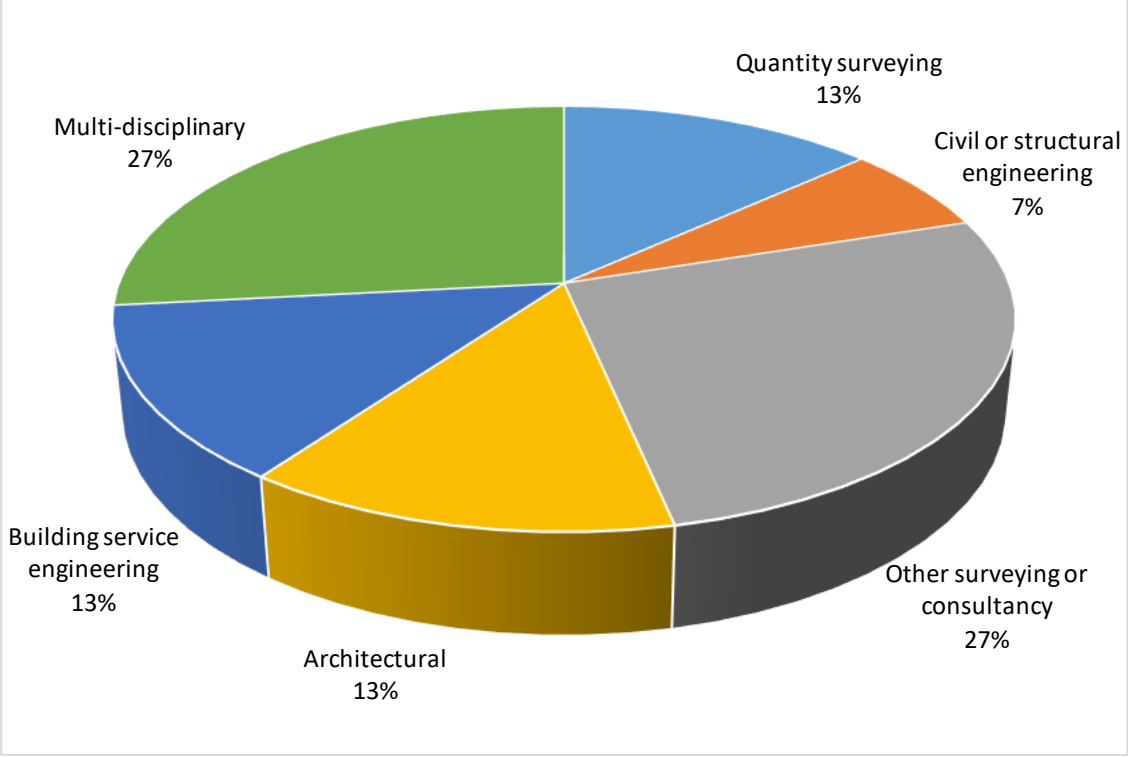


Figure 5-6. Sectors represented by respondents in the pilot study.

The only missing data in the entire data set was an unexplained missing response to Q2.a (affective commitment) from case number nine. The mean time for completing questionnaires was 12 minutes. Therefore, it was considered unnecessary to amend any items or reduce the number of questions to reduce the risk of missing data or improve the response rate.

The scales for the nine constructs were subject to reliability testing using Cronbach's α in SPSS v24. Whilst account was taken of the high level of error likely in such a small sample, the results suggested a high level of inter-item reliability for the nine sub-scales. All α values were >0.8, which is acceptable (Field, 2018). The results showed that the reliability of three of the constructs could be improved by dropping one item. For value-based commitment, the item slightly reducing construct reliability was 4.e.: "*We get value for money in return for what we give to the supplier".* This item had been added due to the findings of the qualitative research. For both repatronage and PWOM, the negatively worded items were less reliable than the others in the item banks. An examination of the data suggested that several respondents had failed to notice that these questions were reversed, and so the reliability of the scales could be improved by their removal. However, given that the overall scale reliabilities were acceptable compared to the guidance values provided by Hair *et al. (*2014) and Field (2018), all items were retained for the final study.

Table 5-4. Results of scale-reliability testing for pilot-test data

Construct	Cronbach's α	Cronbach's α achieved by dropping item(s)
Affective commitment	0.93	-
Locked-in commitment	0.90	-
Value-based commitment	0.81	0.89
Trust	0.95	-
Functional quality	0.92	-
Technical quality	0.90	-
Communication quality	0.92	
Repatronage (RP)	0.83	0.91
Positive word of mouth (PWOM)	0.87	0.94

In response to the researcher-feedback questions, two respondents commented that some items seemed to be asking the same thing. To minimise the risk of respondent frustration, a comment was added to the final questionnaire stating: "*Some of the questions may appear to be repetitive but please answer them to the best of your knowledge.*" Follow-up discussions were held with eight of the fifteen respondents after completing the survey. This allowed face-to-face feedback and an opportunity to assess construct validity. The conceptual meanings of the constructs were explained and opinions sought on whether the different items reflected the intended concept. The respondents felt that the individual items were reflective of the constructs, and no further refinements were necessary.

5.7.8. Sampling for the main survey

When undertaking a survey as part of research, it is necessary to first define the population (Fellows and Liu, 2015). This controls for extraneous variation. It also denotes certain limits, since the findings of a survey can only be generalised to the population from which the sample was taken (Bryman and Bell, 2015).

The population studied was the clients of CPS firms based in the Midlands. A decision was made to limit the defined population to this specific region. This

constrained the degree to which the findings could be generalised. However, a sample across a large geographical spread can increase the variance within a sampled population, which could then increase the sampling error (De Vaus, 2013). Therefore, the population was limited to this specific region, given that it was practicable to achieve a representative sample population.

It was recognised that limiting the sample to clients with postal addresses in the Midlands would not be completely effective in ensuring that results were all relevant to the proposed scope. Whilst local government and housing association clients are likely to operate in a very localised area, others (such as retailers or property developers) may travel and work wider afield. However, the purpose of limiting the sample to the Midlands was one of sampling practicability and generalisation, rather than being to address any questions about the specific working culture of this geographic region.

The definition of a CPS client used in this study is that of the CDM Regulations (2015), specifically the "*individuals for whom a construction project is carried out"* as part of their employment (HSE, 2015). No direct figures could be found regarding the size of the CPS firms' client population within the Midlands. Therefore, it was estimated indirectly using data from CIC (2008). As of 2006, there were ~270,000 people working in CPS firms in the UK (~0.7% of the total working population). The Report did not break down the CPS population per region. However, it did provide regional earnings data. Approximately 13% of total income from UK CPS fees is earnt by firms operating in the Midlands. If fee earnings are assumed to be broadly equivalent across the sector, there are an estimated 35,100 construction professionals operating in the Midlands region. This is likely to be a slight overestimate of CPS practitioners, given that the largest firms are likely to employ non-fee-earning individuals who have support roles or who are in training. Whilst varying from situation to situation, a conservative

estimate of the client population assumes that the number of CPS clients corresponds approximately with the number of CPS practitioners. Based on this, the number of CPS clients within the Midlands was estimated to be 35,100. Undertaking a census of the entire CPS-client population was impracticable. Therefore, a sampling survey was undertaken.

Sampling is the selection of individuals from a defined population following prescribed rules (Czaja and Blair, 2003; Saunders, Lewis and Thornhill, 2019). Both the validity and reliability of a study involving sampling depend on the degree to which the sample reflects the population of interest (Hair *et al.*, 2014). Since one of the aims of the quantitative research phase was to make generalisations about the population, inferential statistical methods were required. To make inferences, probability (random) sampling was necessary. The size and structure of the sample must yield sufficient reliable data for inferences to be drawn at a required and specified level of confidence, so as to achieve statistical validity (Fellows and Liu, 2015). Figure 5-7 illustrates the sampling methodology for the survey.

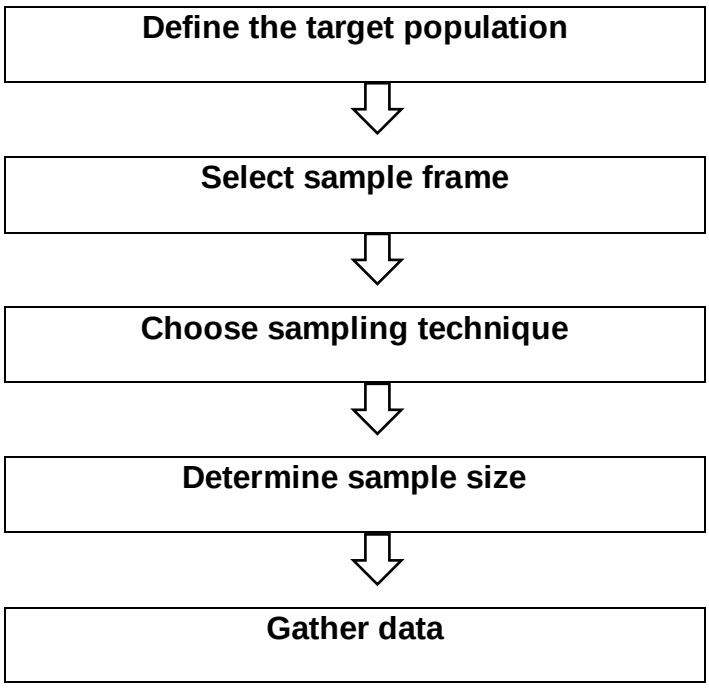


Figure 5-7. Overview of the sampling methodology employed.

Once the population had been defined, it was necessary to define a sample-frame from which the list of potential cases for the sample would be drawn (Bryman and Bell, 2015). To determine a suitable sample size, several factors were accounted for, including the degree of accuracy required, the anticipated variability of the population and statistical validity. The following formula derived from Czaja and Blair (2003) was used to calculate the required sample size:

$$n = \frac{t^2 \times p(1-p)}{d^2}$$

Where:

n = sample size

t = probability level equating to the normal distribution z-score

p = variance expressed as a decimal

d = confidence interval (accepted sample error) expressed as a decimal.

In line with Field's (2018) guidance, a probability level corresponding to 95% of the population (within two standard deviations) was selected, which equates to a z-score of 1.96. The confidence interval is the tolerated level of sample error. The smaller the level of sample error accepted, the larger the sample will need to be. Using the aforementioned calculation, setting a 5% level of confidence would have required a sample size of 384 cases, which was unrealistic given time and budget constraints. Therefore, a 10% level of confidence was selected based on a precision and practicability assessment.

With respect to the calculation of variance, Czaja and Blair (2003) maintained that responses on an attitude scale (as adopted in this study) can be dichotomised between those who agree and those who do not. Given the uncertainty, a worst-case estimate of 50% (0.5 when expressed as a decimal) was selected as the

variance (p). Following this, the sample size (n) was computed to the nearest integer:

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.1^2}$$

$$= 96$$

Given that the population was finite, the sample size was adjusted to account for the estimated population size:

$$\text{Adjusted } n = n / (1 + [96-1/\text{population}])$$

$$\text{Adjusted } n = n / (1 + [ss-1/135{,}100])$$

$$\text{Adjusted } n = 95.9$$

Rounding to the nearest whole number, the adjusted sample size was the same as the originally calculated sample size. This is to be expected where sample sizes are <5% of the population (Czaja and Blair, 2003).

An additional sample-size calculation was conducted to account for statistical validity with respect to the intended hypothesis testing method. An objective of the quantitative research phase was to make generalisations within the wider population, which requires an adequately number of samples. A compromise was made between the number of predictors in the model and the level of insight achieved. For multiple regression, the number of cases required is a function of the number of predictor variables. Pallant (2016) offered this formula for calculating the number of cases necessary:

$$n = 50 + 8m$$

Where:

n = number of cases required

m = number of predictor variables in the equation.

Prior to the factor analysis, the conceptual model contained seven predictor variables. Based on this, the number of cases required was as follows:

$$n = 50 + (8 \times 7)$$

$$n = 106$$

This suggested that a slightly larger sample was required for statistical-validity purposes, and therefore it was increased to 106. A sample size of >100 cases is classed as a large sample, which provides sufficient statistical power to minimise the risk of a Type II error (Pallant, 2016). The response rate to surveys in the construction industry is generally 25–35% (Fellows and Liu, 2015). It was therefore necessary to account for non-responses using the more conservative value of 25% to calculate the survey sample size. The sample size was adjusted to account for non-responses as follows:

$$\text{New sample size} = \frac{n}{\text{Anticipated response rate}}$$

$$\text{New sample size} = \frac{106}{0.25}$$

$$\text{New minimum sample size} = 424.$$

Whilst the minimum sample size was 424, the available budget allowed for a slightly larger final sample size of 455. When conducting research, it is important to minimise sampling bias, which leads to sampling error. This is a distortion of the representativeness of the sample when some members of the population have little or no chance of inclusion within the sampling frame (Bryman and Bell, 2015). The literature was examined to find an effective method used by previous

researchers to access a CPS-client population. The review determined that most prior CPS studies focused on the professionals themselves rather than their clients. One of the few studies that used CPS clients as the unit of observation was that of Hoxley (2000b). However, the method of accessing the client population used in that article was unsuitable for this study, as it used a RICS directory that is now outdated and discontinued. Given that one of the aims of this research was to make wider generalisations across the Midlands, a method of randomly sampling the population was necessary.

CPS clients operating in business-to-business markets were difficult to access. Therefore, a postal survey was selected as a means of obtaining survey data. The use of an email survey as a means of accessing the population was discounted, as sending unsolicited emails (even for research purposes) could potentially contravene the General Data Protection Regulation (GDPR). Distributing the surveys by post was more time-consuming and expensive (in terms of printing and postage costs). However, postal surveys are not subject to the same restrictions that are placed on the use of email (ICO, 2018).

The main study sample-frame comprised 755 potential respondents from the Midlands region. The postal contact details of named potential client respondents were purchased from two UK mailing-list companies (TDP Marketing Ltd and Electric Marketing Ltd). Commercial databases have been used as a means of accessing construction client populations in research (e.g. Jiang, Henneberg and Naude, 2011). To ensure compliance with GDPR, an assessment was made of the potential data suppliers to confirm that they were Information Commissioner's Office (ICO) registered and operated to a GDPR-compliant policy. Checks were made before purchase to ensure that the proposed methodology used in the research complied with the mailing-list company's terms of use. The brief provided for scoping of the data was "*clients of architects, quantity surveyors, building*

services engineers, civil and structural engineers, planners (town planners), project managers, multidisciplinary practices and other specialist surveyors from the Midlands (UK) region." Additional guidance for targeting the CPS-client population was provided to the mailing-list suppliers, including giving the typical job titles of CPS clients obtained from carrying out the qualitative research phase and literature review. The sample was generated by a random number generator in Microsoft Excel, with the first 455 selected from the sample-frame list. These were subsequently used as the sample for the main survey.

5.7.9. Administration of the questionnaire

The questionnaires were posted to the respondents. A stamped addressed envelope was included with each questionnaire to facilitate its return and improve the response rate. Although they incur costs of printing and postage, postal surveys are less intrusive than telephone surveys (Czaja and Blair, 2003). A disadvantage of the selected method was the time required to distribute and collect the returned questionnaires for both the pilot and main study. However, unsolicited emails and telephone questionnaires engender very low response rates.

5.8. Chapter conclusion

Chapter 5 has set out and explained the research methodology. A mixed methods design was selected and the justification for doing so has been provided. Details of the qualitative and quantitative methods employed have been explained in detail to allow replication and inter-study comparisons. The results of the qualitative research phase are presented in Chapter 6. Building on these findings, the results of the quantitative research phase are subsequently presented in Chapter 7.

Chapter 6. Qualitative analysis results

6.1. Chapter introduction

Chapter presents the results of the qualitative research. The first part of Chapter 6 explains how the themes and sub-themes were developed during the analysis. It then proceeds with the findings of the analysis used to explore certain assumptions. Specifically, these were the appropriateness of studying CPS collectively and the degree of influence that KCEs have over the decision to maintain or terminate CPS supplier-client relationships. The main body of the Chapter presents the analysis results, explaining the themes, their sub-themes and the relationships between them.

At the end of the Chapter, the refined conceptual model is presented, which incorporates the findings of the qualitative phase of analysis. The model was trimmed to achieve a parsimonious set of service-related antecedents for which sufficient evidence was found to associate them with CPS-client loyalty.

6.2. Developing themes and sub-themes

The data were initially coded to predetermined themes developed from the literature review whilst also searching for other candidate themes. ‘Codes’ are elements of data that contribute to a theme, whereas a ‘theme’ is a recurrent, meaningful grouping of data (Javadi and Zarea, 2016). Using NVivo 11, the themes and their sub-theme structure were developed, incorporating *a priori* and emergent findings (Figure 6-1). Pattern analysis was undertaken to show the incidence of association between the antecedent and loyalty themes; the outline structure of associations is shown in Figure 6-2.

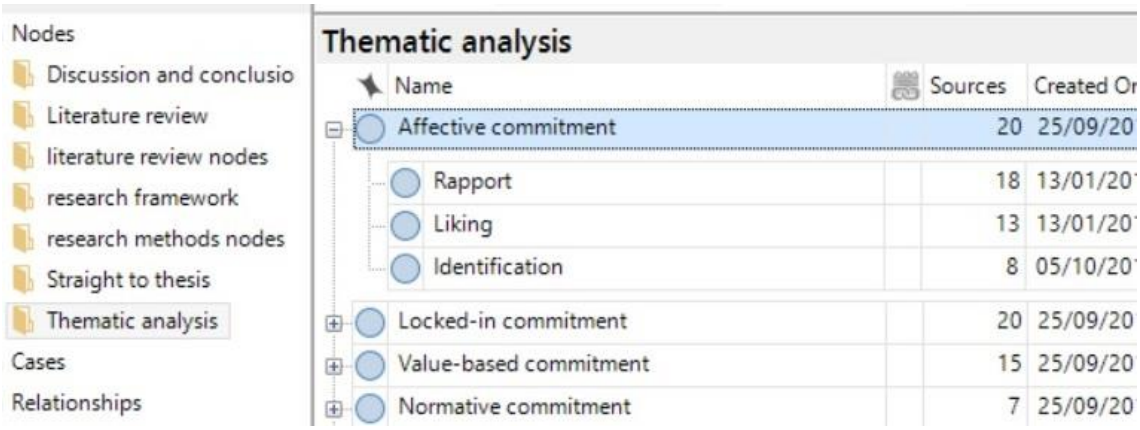


Figure 6-1. Screenshot of example theme and sub-themes (NVivo 11).

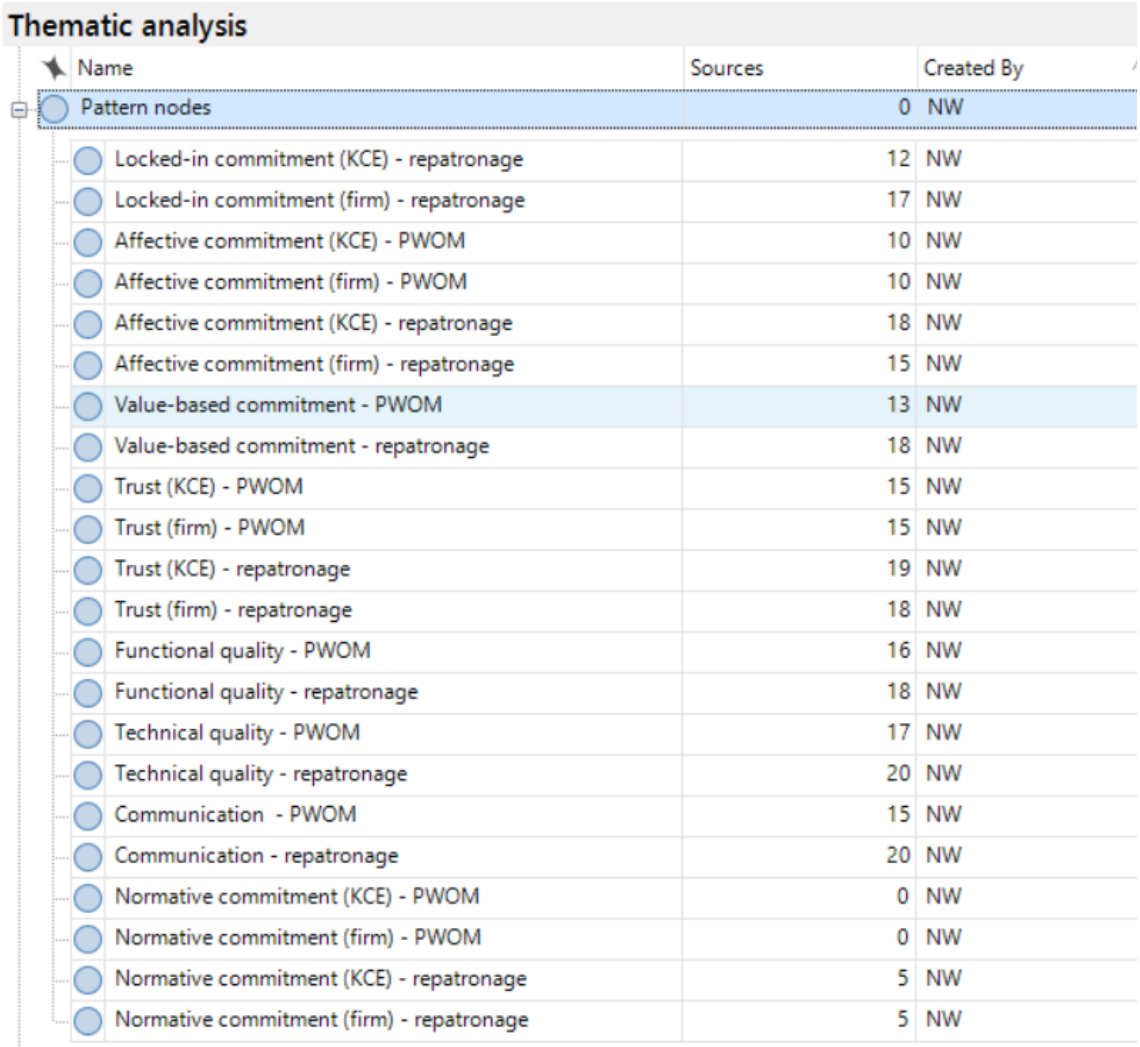


Figure 6-2. Screenshot of pattern analysis theme list (NVivo 11).

The themes and underlying sub-theme structure were refined during the qualitative analysis, based on the evidence obtained from participants. There was inconsistency in how antecedent themes and constructs had been defined and operationalised in the literature. For example, "*concern for the client's well-being*" has been conceptualised as the benevolence aspect of trust (Doney, Barry and Abratt, 2007), whereas Sarapaivanich and Patterson (2015) used it to represent an aspect of functional quality. The qualitative analysis was used to resolve conflicting evidence in the literature on how themes should be conceptualised for the purposes of this research. For example, where a participant mentioned the trustworthiness of the CPS supplier being important, they were asked to expand on what trust meant to them.

The results were used to refine and position the sub-themes. These were clearly delineated from each other within the NVivo node structure to facilitate movement where positional changes were necessary. Once the themes and their sub-themes had been developed sufficiently, pattern analysis was undertaken to identify associations between the antecedent and loyalty themes. It was necessary to revise the pattern analysis data on several occasions when sub-themes were collapsed or moved between main themes. The pattern analysis summary provided in Part A of Table 6-1 shows the incidence of association identified in the data between the antecedent themes with repatronage (RP) and PWOM. Part B of Table 6-1 shows the main themes with their final underlying sub-theme structure.

Table 6-1. Export of the qualitative analysis results from NVivo 11

Theme Name	Sources (out of 20)	References
Part A. Pattern analysis results		
Affective commitment (firm): RP	15	38
Affective commitment (firm): PWOM	10	14
Affective commitment (KCE): RP	18	69
Affective commitment (KCE): PWOM	10	15
Communication quality: PWOM	15	16
Communication quality: RP	20	121
Functional quality: RP	18	65
Functional quality: PWOM	16	25
Locked-in commitment (firm): RP	17	35
Locked-in commitment (KCE): RP	12	25
Normative commitment (firm): RP	5	6
Normative commitment (firm): PWOM	0	0
Normative commitment (KCE): RP	5	6
Normative commitment (KCE): PWOM	0	0
Technical quality: RP	20	132
Technical quality: PWOM	17	34
Trust (firm): RP	18	80
Trust (firm): PWOM	15	33
Trust (KCE): RP	19	100

Theme Name	Sources (out of 20)	References
Trust (KCE): PWOM	15	26
Value-based commitment: RP	18	66
Value-based commitment: PWOM	13	19
Part B. Incidence of antecedent themes and sub-theme structure		
Locked-in commitment	20	60
Difficulty finding others who understand unique requirements	12	27
Lack of alternatives with right skills and attributes	11	19
Risks, time and costs of switching	10	14
Affective commitment	20	80
Identification	8	9
Likeability	13	25
Rapport	18	46
Value-based commitment	15	39
Benefits exceed costs associated with relationship	15	39
Normative commitment	7	9
Guilt associated with switching	2	2
Obligation	6	7

Theme Name	Sources (out of 20)	References
Supplier expectation	0	0
Trust	20	194
Client's best interests at heart	14	34
Confidence	16	40
Integrity	16	58
Expertise	16	33
Reliability	16	33
Functional quality	19	100
Flexibility	12	15
Responsiveness	19	85
Technical quality	19	130
Helps me achieve my goals	15	32
Meticulousness	15	38
Understands my needs	15	60
Communication quality	19	99
Explains pros and cons	10	15
Explains things meaningfully	10	36
Keeps me updated	18	48

6.3. The study of collective construction professional service suppliers

The qualitative research phase determined if the decision to study CPS supplier-client relationships collectively was warranted. Most participants intuitively understood and accepted the concept of 'CPS.' Most felt that CPS suppliers were a distinct group of suppliers, differing from wider service and construction roles. Participant H (property manager) said: "*I think that the surveying practices and other professionals are similar in my experience. They are different to other service firms anyway.*" Participant R (developments manager) expressed a view that there was a commonality between CPS, stating that: "*There are different skill sets involved, you know. But a professional in whatever field they are in has certain traits in my view*."

Further evidence was sought from participants regarding the perceived homogeneity or heterogeneity of CPS suppliers. Most participants expected CPS suppliers of all types to be experts in their core discipline. Furthermore, many participants expected meticulousness in the CPS' application. Participant E (developments manager) stated: "*With an architect, you look for good detailing, thorough detailing, plans and specifications; things like that. For a QS [quantity surveyor], you obviously want someone who will value the works correctly, ((pause)) make sure, when they do the tenders, that they do the prelims thoroughly, ((pause)) [with] attention to detail*."

Many participants expected integrity in terms of professional ethics and service levels, irrespective of the CPS sub-discipline. Participant L (housing and corporate asset manager), concluded: "*Yes, different skills, but at the end of the day, for any professional, I would expect integrity and all that quality of service. I would always expect all those things."*

Reliability was another aspect of professional integrity that was also mentioned as being a defining trait of CPS by many of the participants.

> *"There* is *a difference between the professionals and the contractors, but I think it's all down to ((pause)) Its this word 'professional.'. If I say to an architect or a building surveyor or a quantity surveyor, "I'll see you at 10am on Tuesday morning," they will be there at 10am on Tuesday morning, or they will contact you to tell you why they won't be there at that time. If I say it to, you know, a plasterer or anybody who does the wet trades, it's hit and miss whether they are going to be there on Tuesday at any time, never mind at 10am!"* (Participant Q, project manager)

The somewhat disparaging remarks of Participant Q should be taken in context with his recent bad experience of renovating a property and being repeatedly let down by a succession of contractors. Furthermore, many participants considered CPS to be different from other built environment roles, this did not extend to them being viewed as more important. Indeed, as the following extract demonstrates, many participants viewed CPS as no more or less than part of the wider team needed to deliver a project.

> *"I suppose I have an expectation that whoever is doing the job is the expert. You know, the guy who designs it, but then there is the guy who builds it. He is the expert because* he *is the guy that builds it. The guy with the letters after his name has a knowledge [so] that you could say he is an expert, but he is not the guy who builds it, the guy who knows the real problems."* (Participant S, project manager)

Some participants expressed high expectations of *all* their suppliers, professional or otherwise. Participant S (project manager) conveyed the view that: "*Whether I'm buying a phone contract or consultant engineering services, I expect they are going to deliver what I am asking for. And if not, then I've got the wrong person*."

In summary, most participants stated that the approach adopted in treating CPS suppliers as a collective and as distinct from other construction and built environment service providers was appropriate.

6.4. Participant experience and influence over client loyalty

When interviewing client participants, one of the first matters to establish was their degree of involvement in CPS supplier-client relationships and their level of control over the decision to continue or terminate them. It was important to establish this to ensure that the data were from participants with direct and relevant experience of the central issues being investigated. Additionally, evidence was sought to determine the degree of influence that client representatives had on organisational decision-making with respect to CPS-supplier retention.

Influence over the selection and retention of CPS suppliers varied between respondents. Participant G (property developer) stated that he had "*100%*" control over the choice of CPS suppliers appointed to his projects. Whilst no other participants declared that they had his level of absolute autonomy, most felt that their opinions were highly influential on the decision to appoint and reappoint CPS suppliers. This was evidenced by Participant H (property manager) who stated, "*I have the influence, as I make the board recommendation as to who we go with*." Even clients working for public sector organisations that were required to follow certain public procurement procedures (at least for larger-value works) confirmed that they had an influence and some control. For example, if CPS suppliers met certain criteria, Participant E (project manager) said: "*We have complete flexibility*" with respect to whom they appointed on their projects.

In summary, most client-side participants believed they had considerable influence over purchase decisions. This agrees with Laing and Lian (2005), who suggested that the buying centre for business-to-business professional services within client

firms is often small, normally comprising one or more people who deal directly with the supplier. In contrast, lower-risk purchase decisions are often made on behalf of others by procurement professionals. For the minority of participants who felt that they had less control, this related more to their relatively junior position, as opposed to interference from other departments or stakeholders.

The CPS suppliers interviewed all felt that the client representatives they dealt with were the decision-makers, or at least had significant influence on whether their services were retained or not. This was demonstrated by Participant J (firm partner), who stated: "*Absolutely. I would say, erm, you know, of that 70% we have that are regular clients, it is them making the decision*." Even the two participants in more junior positions who felt that their senior colleagues had the final say in the CPS-supplier selection decision acknowledged that they had at least some influence. Therefore, they were not excluded from the analysis.

6.5. The impact of antecedents on different facets of loyalty

In Chapter 3, it is argued that repatronage and PWOM are empirically distinct. However, little evidence was obtained during the qualitative research phase to support this. Most of participants felt that the reasons they would be likely to recommend a CPS supplier were broadly the same as those associated with continuing to use their services. For example, when asked about why he might recommend a CPS firm to others, Participant S (project manager) referred back to the reasons he would continue to use their services, stating: "*Again, they do what it says on the tin*." Participant R (developments manager) reiterated the antecedents of repatronage when asked about PWOM, saying: "*Well, all the things we talked about – completing the project on time, [have] done what you needed them to do, being easy to work with, keeping you abreast of the process, deliver*

on budget and a good value of service. You know, affiliated to professional bodies."

One of the few exceptions was obtained from the account of Participant H (property manager). She revealed that it was unlikely that she would recommend or refer her incumbent CPS to others, despite expressing strong repatronage intentions towards them: "*I am a bit reserved about recommending them because I know how busy they are and I kind of don't want them to take on any more work. That's not because of anything bad about them, but I want my work serviced first."*

Watson *et al*. (2015) argued that the propensity to recommend is likely to be situational and depend on the supplier's perceived ability to deliver services successfully to others without detrimental impact on the advocate. Furthermore, when clients recommend a professional supplier to others, this comes with a certain reputational risk, as there is no guarantee that the supplier will meet expectations (Eisingerich and Bell, 2007). This is reflected by the evidence of Participant P (facilities manager), who felt inhibited from recommending CPS suppliers due to perceived self-risk, concluding: "*That's my reputation on the line, so it's difficult. There have been times when I haven't because I don't want to put my name to them*." Whilst far from overwhelming, the relatively weak evidence was sufficient at this stage to conceptualise repatronage and PWOM provisionally as empirically distinct, desirable outcomes. The dimensionality of repatronage and PWOM was, in any event, going to be tested empirically during the follow-up quantitative phase of analysis detailed in Chapter 6.

6.6. The influence of key contact employees on loyalty

One of the objectives of the research was to explore the differential impact on CPS-client loyalty of key contact employees (KCEs) versus the supplier firm. An emergent finding was that most clients felt that the contributions of both the KCE

and the firm collectively are important to and influential on loyalty. Many participants expressed the view that the impact of the KCE and the firm are very much intertwined. Participant A (estates manager) stated: "*The individual is very much the firm. That's the person we are dealing with*." Participant B (developments manager) provided evidence of the importance of the specific individuals, saying, "*We have a single go-to organisation because they are just excellent, and you just know it's the person who comes in who does the work*." With respect to CPS, Participant E (project manager) advised that "*Companies need to look at their key account person and look at their client relationships, because that is paramount. It makes a huge difference*."

The research objectives did not extend to identifying the target of client loyalty. However, evidence from some participants demonstrates that personal loyalty can be so strong that it presents a risk to CPS firms of losing the client should the KCE move on. Participant P (facilities manager) confirmed, "*I have had someone move company, and I have followed the guy to his new company because I know that guy knows our site and has a good understanding of our needs. He takes a lot of work off me, so I have switched companies because of that*."

The KCE may also have adverse impacts on loyalty if clients perceive them to be sub-standard in terms of the KCE's own conduct or ability to manage their teams. A frustration expressed by some respondents was that the KCE has merely been the front face of the firm, with most of the service delivered by less-experienced, junior professionals, sometimes with detrimental consequences.

> *"I mean, you've only got to look at a drawing: "Drawn by". You know, let's say the person you are seeing, ((pause)) their initials are "AB" and the drawing is produced by "XZ" and checked by someone else, and you say, "What's your input on that?" and it's a blank face"* (Participant B, developments manager).

Participant E (project manager) clarified: "*Sometimes the guy is really good, but the staff are either overworked or overloaded with other projects, and, again, they are left to their own accord*."

Participant J explained the problems that delegation by KCEs can lead to, which he experienced during his time working for a large, multidisciplinary CPS practice.

> *"What I would say is that where clients are let down is where the person who comes to the meeting is a director or a senior person, and then they get back to the office and they delegate all this work out to the team or a person who is not at the meeting ((pause)) [who has] not got direct contact with the client, and then that director probably goes off to do something else. Then when it comes to reviewing it, he is rushing it, and that's where the intrinsic issue is"* (Participant J, firm partner).

The clear frustration expressed by some client-side respondents was that much of the service was delivered by junior professionals with resultant quality problems due to inadequate supervision by the KCE. Similar findings are reported in the qualitative CPS research article of Jaafar, Aziz and Wai (2008). The participating clients in this study complained about poor designs produced by inexperienced, junior professionals who rely heavily on computer-aided design (CAD) packages and lack understanding of practicality or buildability. The participating clients' frustrations appear to be focused on the supervising KCE, in that the designs were "*only endorsed with just random checking*" leading to "*highly questionable*" technical-quality outputs (Jaafar, Aziz and Wai, 2008, p.204). Additionally, some respondents in this research felt there was a glut of educated-but-inexperienced designers working in the construction industry, but a dearth of those who had both practical and theoretical grasps of their discipline. Evidence supporting this assertion was obtained from some of participants.

"I gave him a job to do, you know; he drew it up and I suppose the key word is he "drew" it. He did it on the computer, but he just didn't seem to understand the fundamentals. (.) There are very few people who have done the practical and got the theoretical knowledge" (Participant S, project manager).

This research explored the evidence from participants qualitatively to determine whether antecedents do operate at both KCE and firm levels. As evidenced in the following sections of Chapter 6, certain relationship-quality antecedents have distinct KCE and firm levels; specifically, affective commitment, locked-in commitment and trust. Where no such evidence was obtained, the remaining antecedents were refined down to singular target-neutral themes within the refined conceptual model.

6.7. Locked-in commitment

Evidence of locked-in commitment at both KCE and firm levels was revealed in many participant accounts. Its associated sub-themes are 'Difficulty finding other suitably skilled and knowledgeable alternatives,' 'Lack of alternatives with an ability to deliver unique requirements' and the 'Costs, risks and time associated with switching.' Only a minority of participants expressed feelings of being locked in due to contractual commitments. Efforts were made during the process to disentangle this from other organisational and technical constraints. Commitment due to organisational constraint by virtue of contractual lock-in was not coded, as this falls outside both immediate CPS suppliers' influence and the scope of this research. Therefore, when coding to locked-in commitment, checks were made with the respondent that the constraint they felt was associated with one or more sub-themes and not just due to contractual obligations.

No relationship was illustrated between locked-in commitment and PWOM. This supports the findings in extant research (e.g. Rauyruen and Miller, 2007; Cater and Zabkar, 2009; Cater and Cater, 2010) and the early decision to exclude this relationship from the conceptual model of CPS-client loyalty.

6.7.1. Key contact employee locked-in commitment and repatronage intentions

Whilst participants reported that there was no lack of suppliers offering CPS, many felt there was a distinct lack of individuals with the requisite skills and knowledge to serve participants' needs. For example, Participant P (facilities manager) felt there were few CPS practitioners with the skills and experience needed to undertake facility design in the sector within which his firm operated: "*I didn't want anyone else! Generally, those people are hard to come by, and from past experience, the companies move their best people around sites quite regularly, because they are the face of the organisation."*

Some participants felt the problem was exacerbated by newer entrants to the professions being insufficiently prepared by their employers, in terms of grounding them in practical aspects of construction.

> *"I think one of the key aspects to project management has been lost. There are very few that are coming from a trade background, in my experience, which is a pity, because I feel I understand certain things far better than others coming from a graduate background, which most of them do. I don't think they fully understand the process. I think they understand the academic side, but not the construction side. […] There is a massive skills shortage. I mean, I don't know anyone else"* (Participant C, project manager).

Feelings of being locked into using the services of a specific KCE due to the individual's unique skills and knowledge are evident in many accounts. Participant

G (property developer), recounted: "*You might find you only have 10 professionals in that field, but actually, when you really understand what you are asking for, there might be only one or two who are even close to being good at what you need!"*

As well as locked-in commitment to a KCE due to a scarcity of professional skills, many participants felt reliant on specific individuals, due to those individuals' unique knowledge, which had been developed during past periods of delivery. Participant H (property manager) expressed feelings of being locked in to using her surveying firm's KCE due to his detailed understanding of her estate and his knowledge of previous refurbishment and demolition projects. This appears to be on an individual level rather than a firm level, given her argument that *"I don't think there is anyone else there with his level of experience. I don't think the other partners have the expertise or knowledge to service us*."

Many participants declared that they felt they had no choice but to use the services of certain CPS suppliers, due to the time and effort of establishing a relationship with a new KCE. This was a result of a KCE's valued knowledge of client processes and procedures, building assets, or legacy project issues.

> *"Because having a key person, it's like, every time we meet, I haven't got to set out what our standards and needs are, what the site is. Site knowledge is an important thing because I can say where so and so is, and I haven't got to take him, show him, explain. We have experiences where they come in and have said, "Oh, I put that in." So, we like, where possible, to have a long-term partnership"* (Participant A, estates manager).

The association between locked-in commitment and repatronage intentions was also supported by the account of an assistant property surveyor (Participant M) who reported, "*Just thinking of a specific QS, […] he has been doing it for years,*

he knows our policies and procedure, so it's much easier with him having that information."

6.7.2. Locked-in commitment to firms and repatronage intentions

The collective knowledge, skills and attributes of the CPS organisation also -- served as a barrier to clients switching. As well as feeling locked into service relationships with individuals, evidence was obtained from many participants that suggests they also felt restricted to using particular CPS suppliers.

A business director (Participant T) expressed a view that there was a lack of CPS with the skills she required, stating: *"In some instances where there was a shortage of specialists, we have had to use them. We don't like it, but we have to do it."* Participant S (project manager) explained: "*Sometimes they may be so engrained in your process they know they have got you over a barrel*." A facilities manager (Participant P) argued that, due to his organisation's specialised needs, it was both difficult to find alternative firms and risky to do so: "*We are not the type of firm who can pick up a directory and bring in people to do this and that, (.) so our relationships do have to be collaborative and long-lasting. […] For new suppliers, ((pause)) it's tough to make that leap*." These accounts suggest that the collective knowledge, resources and organisational attributes of the supplier firm contribute to locked-in commitment, as does the knowledge and experience of individuals.

A particularly strong locked-in commitment sub-theme that many participants expressed was the risk associated with switching CPS suppliers. Harvey and Mitchell (2015) argued that professional services are perceived by clients to be of higher risk, due to the consequential outcomes of good (or bad) professional advice. It appears from many participants' accounts that, where CPS firms are perceived to be performing at an acceptable level, relationship anchors are created, which are rooted in risk avoidance. This was demonstrated by the

unprompted axiom of ‘better the devil you know’ appearing in several participants’ accounts:

- “*It’s always a risk of changing service providers, so it’s better the devil you know, as they say*” (Participant I, estates surveyor).
- “*Once you are in, the attitude is ‘better the devil you know’*” (Participant R, developments manager).
- “*Sometimes you just think, ‘better the devil you know’, and we end up using them*” (Participant E, project manager).
- “*I think if you have got a good supplier and a very good relationship, and the work is quality, […] it’s hard to make that leap of faith to a new company*” (Participant P, facilities manager).

As well as feeling locked into a CPS firm due to its collective knowledge and skills, the complex nature and often long duration of construction projects appears to have inhibited clients from switching CPS firms. This has resulted in a perceived risk being associated with the loss of valuable knowledge possessed by the CPS supplier that was developed during earlier phases of service delivery. An additional relationship-anchoring factor was the financial cost of terminating the incumbent and bringing in a new CPS supplier.

> *“For investors to be interested, we would instruct a multidisciplinary practice, [which] tended to be civil engineering orientated, like [large CPS firm] or someone like that, and we would say we need to know everything about that site: all the services, all the costs. So we would have a booklet with nice aerial shots and all the different layers, with services, zoning, density. So once you have a company who has done that for you, it’s quite difficult to change when the project comes to fruition, because they know that site better than anyone else, erm, so you wouldn’t want to go to*

another practice, really, because you would have invested; ((pause)) you might have spent a hundred grand!" (Participant Q, project manager).

No evidence was demonstrated of locked-in commitment being associated with the propensity to give PWOM to the CPS supplier. This aligns with extant evidence in the literature with respect to the lack of any evidence for a positive relationship between constraint-based forms of commitment and PWOM (Rauyruen and Miller, 2007; Cater and Cater 2009; Cater and Zabkar, 2009).

6.8. Affective commitment

The affective aspect of commitment is an "*emotional, social sentiment*" (Gilliland and Bello, 2002, p. 25), one of "*familiarity [and] friendship*" (Sharma, Young and Wilkinson, 2006 p. 65) and a sense of "*identification and attachment*" (Geyskens *et al.*, 1996, p. 315). During the analysis process, affective commitment sub-themes of 'liking,', 'rapport' and 'identification' became apparent. 'Liking' is a sub-theme associated with positive feelings towards the CPS target. 'Rapport' represents evidence of clients enjoying the interaction with the CPS, which most participants stated was important. 'Identification' represents evidence of clients feeling similar to the CPS. Affective commitment to KCEs and their firms are interrelated, with the former having been shown to be an antecedent of the latter (Anaza and Rutherford, 2014). In addition to identification and attachment, Sharma, Young and Wilkinson (2006, p. 65) also extended affective commitment into "*personal confidence*". However, in this research, personal confidence was coded as a sub-theme of trust, based on the emergent findings and supported by evidence from most extant studies (e.g. Moorman, Deshpande and Zaltman, 1993; Morgan and Hunt, 1994).

6.8.1. Affective commitment to key contact employees and repatronage intentions

Affective commitment to the KCE was associated with repatronage intentions in most of the participants' accounts. Whilst not being the sole determinant, the personal connection clients have with the individual they deal with positively influenced their intentions to continue using the CPS supplier. Personal likeability was advantageous for CPS representatives, in putting clients at ease and encouraging interaction. Participant S (project manager) stated, "*You have another informal level of chat. So you don't feel uncomfortable ringing up and asking questions [such as] 'Can you do this?', because it's like ringing up a chum*." Participant P (facilities manager) expressed the view that rapport with his KCE was important: "*There is always a bit of banter. It's good to have that. It's a high-pressure environment; it's good, yeah, to have that relationship.*" Participant D (firm director) felt that establishing an individual connection was of intrinsic importance for CPS in obtaining repeat business, explaining that: "*You can be the best provider in the world, but if you do not have that rapport with the client, then it's a waste of time*."

Conversely, a lack of individual likeability can damage repatronage intentions. Participant T (business director) stated that *"Ultimately, if they are not a likeable person, it will only be a matter of time before we find someone else with the same skill set.*" Likeability and rapport clearly influence the "*want to*" aspect of relationship continuity (Meyer and Allen, 1990, p. 3). This was illustrated by Participant H (property manager), who said: "*It does make a difference. You know, you don't want to think, 'Oh God,' ((groans)) when they flash up on your phone. You know, if the guy is an arse, I don't want to speak to him*."

Some client participants stated that there was an occasional tendency amongst CPS practitioners towards arrogance, which disinclined them from continuing the

relationship. Participant S (project manager) suggested that: "*Pleasantness goes a long way. You don't have to be brusque and unhelpful*." Participant A (estates manager) said that he had ceased using the services of more than one CPS supplier due to their objectionable mannerisms during service delivery, stating that: "*You get some who are a bit condescending and, yeah, forget it! I can't work with you because you are talking down to us, you know, like you've trod in us*."

The same scenario had been experienced on other side of the CPS-client dyad by Participant D (firm director), who declared that "*You can't be arrogant with customers. Even if <u>they</u> are, you can't fight fire with fire. And I have seen situations where, personally, that's happened, and it kills the relationship*." This aligns with the findings of the professional service study of Pemer and Skjolsvik (2019, p. 359), in which a client in their interviews stated: "*I would never buy consulting services from an extremely snobbish, arrogant, and self-righteous consultant*."

An extension of rapport into actual friendship was reported by only a minority of participants. Most expressed a demarcation between personal and professional relationships, as demonstrated in this quote from Participant F (project manager): *"I've got a consultant who I get on with. I'll take him for a coffee, or he will take me a for a coffee, but that's one of the few exceptions. I've never gone out with him for a drink or anything*."

Similar views on the CPS relationship were also expressed by suppliers, including Participant K (firm director), who said of a long-standing client: "*I wouldn't say I hang out with him on an evening, ((laughs)) but it is a lot easier doing business with someone you get on with*". The findings chime with the professional service study of Vafeas (2010, p. 273), during which the client participants acknowledged a rapport with their KCE. However, 'friendship' was deemed to be too strong a term and indeed was frowned upon due to the perceived risk to objectivity when dealing with the supplier.

Whilst affective commitment is associated with repatronage intentions in many participants' accounts, it is not the overriding factor. Many client participants emphasised the importance they placed on achieving organisational objectives ahead of the relationships they had with their suppliers. Participant E (project manager) explained that: "*Getting on with the individual helps, but it's not essential. Your competency and your integrity, ((pause)) without that, you cannot go there […] Friends? Good! That will help, but it's not everything*."

> *"I do have an engineer who is not particularly charismatic […] but the quality of his work is good. So then you have to evaluate it. If you paint yourself into a corner by being too restrictive, you might find yourself doing yourself out of some good quality advice. […] It's nice, but that's it. Really, it's about who is the best guy for the job"* (Participant G, property developer).

Evidence was obtained from a minority of participants for the identification aspect of affective commitment. However, this was less prevalent than likeability and rapport. Participant E (project manager) suggested that when he previously worked in private practice, a common cultural background influenced certain clients to identify with him and to continue to use his services. He stated: "*I worked for them for years, erm, doing various projects. ((pause)) They are part of my community*." All other instances of identification were associated with a sense of shared professionalism, dedication or skill, or the lack thereof. Participant F explained, "*I like to see them provide the service that I feel I would provide, erm, like a mirror image or better*."

6.8.2. Affective commitment to firms and repatronage intentions

Evidence for affective commitment to the firm being positively associated with repatronage intentions was obtained from many participants. This was conceptualised as the positive and affectionate feelings felt by the client for the

CPS supplier and its employees collectively. By way of example, Participant J (firm partner) was adamant that the multiple relationships between individuals within his firm and client organisations were key to achieving service continuity and growth: "*Probably 70% of our turnover is repeat business. The way we have grown this office is purely down to relationships really*." These relationships proved so strong that they led to several clients switching when he and several colleagues left a large CPS firm to set up their own practice: "*We do, or did, a lot of work with engineering practices. Once personalities left that organisation, we were able to rekindle those relationships."*

Participant C (project manager) maintained that collective rapport was an important factor explaining why his firm continued to employ a certain CPS supplier: "*I think it's how their people get on with our people. That's a big factor*." Participant G (property developer) previously expressed the view that CPS likeability was secondary in importance to competency. He also stated that "*If you'd got an organisation that charged more but made people feel better, I reckon they would be selling out down the road*!" Participant D (firm director) stated that he deliberately engendered a diffused sense of liking and rapport between his own employees and his clients' representatives: "*If you can create a good rapport with as many people as possible, you are spreading your net to catch as many fish as you can."*

6.8.3. Affective commitment to key contact employees and positive word of mouth.

During the interviews, many participants mentioned that personal likeability and rapport with the individual would positively influence the likelihood of them making recommendations and referrals. Participant H (property manager) said that if she were to recommend her CPS, one of the reasons would be that her KCE "*is a very affable, nice person. (.) A real old school gentleman*," which would help ensure that her peers would have a good experience. The account of Participant S

(project manager) demonstrates that a personal connection with a KCE engenders a sense of goodwill and a desire to support them, stating that PWOM "*is built on personal relationships. You are helping him on a personal basis (.) and he wouldn't have got that business except for us*."

Participant D (firm director) confirmed that much of his firm's new business was generated via PWOM from current clients, making it a vital element in supporting business continuity and growth. Whilst arguing that the core service is of most importance to clients, he was considered likeability and rapport as vital. He shared the view: "*Yes, give [Participant D] a call. He will sort you out.' Why is the client saying that? Because you have to be a nice guy*."

Extant studies yield mixed findings regarding relationships between affective commitment to the KCE and PWOM. In their exploratory study of business-to-business services, Bendapudi and Leon (2002) concluded that personal relationships with KCEs positively influence a client's propensity to recommend a firm. In contrast, in less interaction-intensive business-to-business services, Rauyruen and Miller (2007) found no significant relationship between affective commitment to the KCE and PWOM. Professional services are inherently relational (Broschak, 2015). Therefore, for CPS, the impact of the affective relationship with the KCE is likely to have more influence on a client's propensity to advocate a service supplier than in service sectors where there is less personal interaction.

6.8.4. Affective commitment to firms and positive word of mouth

Many participants expressed an inclination to recommend a CPS due to affective commitment to the firm collectively. The account of Participant Q (project manager) suggests that an affinity with people at the firm as a whole would result

in him recommending either the firm or individuals, depending on situational factors: *"I have recommended individuals and their companies. It depends if you have a good relationship with the guy from the firm as well*." The interviewed CPS suppliers had experience of their firms being recommended by clients. The report of Participant D (firm director) is insightful in suggesting that affective commitment to the firm emerges from collective relationships, resulting in PWOM: "*The only reason we got this work is because of a referral. So it must be imprinted on them [that] [firm] are a good company. How did we become a good company? It's about friendships, relationships, every time.*"

Affective commitment to the firm arising from collective relationships and its resultant impact on PWOM was further supported by Participant J (firm partner). This suggests that advocacy arises as a result of the collective effort of the CPS firm: "*If you've got a good team, we get sort of like referrals, like you said. Typically, it's a case of the clients saying, 'All the decent people are now at [participants firm], give them a call*.'"

6.9. Value-based commitment

Value-based commitment is conceptualised as a psychological state that exists where the client perceives that the benefits of the relationship exceed the time, effort and costs of sustaining it (Sharma, Young, and Wilkinson, 2006; Cater and Cater 2010; Keiningham *et al.*, 2015). Whilst the cost charged for the service was mentioned as a factor, no participants indicated that lower price alone led to loyalty. Evidence in the data relating to fees and rates was only coded to value-based commitment when they appeared in context with benefits received from the service. All the participants differentiated value from price. By way of example, Participant G (property developer) argued that: "*Price is price and value is value. They are two very different things*." This finding may be welcomed by CPS

suppliers, and it appears to accord with the Egan Report, which called for a "*new criteria for the selection of partners*" based, not on "*lowest price, but ultimately […] best overall value for money*" (Egan 1998, p. 29). Whilst it can be claimed that value arises out of the actions of individual CPS suppliers, insufficient evidence was obtained to demonstrate that it acts separately at KCE and firm levels. Therefore, the value-based commitment theme was refined to a single level-neutral theme.

6.9.1. Value-based commitment and repatronage intentions

Evidence from most participants suggests that value-based commitment is associated with repatronage intentions. Participant D (firm director) stated that, for CPS to achieve repeat business: "*It's about delivering a first-class service for a reasonable price.*" Similar views were expressed by Participant O (deputy facilities manager), confirming that they would continue to use the services of a CPS offering "*a quality service for the right price*". Participant H (property manager) explained that: "*For me, it's the quality of the service you get and not just the price*." This agrees with Jewell, Flanagan and Lu (2014) that CPS-supplier selection is less dependent on price than it is on service quality. Participant N (compliance manager) said that: "*value for money*" was of overriding importance when deciding whether to use the services of a CPS supplier again. Participant J maintained that most clients understood value and returned to CPS suppliers that offered it. Of the clients that did not, evidence was obtained suggesting that they had learnt the difference between price and value via negative experiences.

> *"You know, we don't go in cheap. We don't go in on a basis to try and win it now and talk it up later; that's not what our organisation is about. I mean, if we go in and our fee is £50,000 and someone else comes in and wants to do it for [£]25,000, you know, good luck to them. When you hear back from*

how the project went – often from the supply chain, as opposed to the client – it never goes particularly well" (Participant J, firm partner).

Participant T (business director) gave a perspective on value from someone appointing CPS suppliers to projects, concluding that, in the construction industry, creating value in a supply chain is a prerequisite for retention.

"And what we find is the law of income says you only earn according to the value you add to someone. So before we feel we have the right to even start charging, we'd better have added big value to the client and be of more help than they expected us to be. So, you know, if you add huge value, they are not likely to go anywhere else, because they will be content with what they have" (Participant T, business director).

Many participants mentioned their desire to achieve added value from their relationships with CPS suppliers. When asked to elaborate, many associated added value with receiving additional benefits from the relationship, above the minimum expectation or what was formally agreed. This appears to be a powerful motivator for continuing to use a CPS supplier. Participant P (facilities manager) gave an example of when he had received added value from a consultant engineer: "*They will come in and physically help me write a specification and tell me what I should be doing and not charge me for it. […] They give you that little bit extra that maybe they shouldn't be doing, but they do that because you're a key client."*

Participant J (firm partner) suggested that the added value offered by his CPS practice was important in achieving repeat business: "*I saw that client yesterday and we were talking about it and he said, 'I've got to pull the contract together; I've got to do this,' and I was like, 'No, we had included for all that within our fee'; you know, [saying,] 'That's all taken care of.'*"

6.9.2. Value-based commitment and positive word of mouth

Value features amongst the reasons why clients would recommend CPS suppliers to others in many of the participants' accounts. By way of example, Participant C (project manager) recommended a CPS supplier due to *"their ability to deliver the design, as requested, the construction brief, the timescale, the value*". Participant E (project manager) recommended a CPS supplier due to the multiple benefits associated with the service received, which exceeded the costs, stating that she did so because: "*The quality of the work is good. They stuck to the deadlines. They were reasonable in their fees*."

The principle of value being different to price extends into the provision of PWOM. Participant N (compliance manager) said he would have no hesitation in recommending a consulting engineering firm he had used recently, such was the perceived value of what was delivered. He stated, "*You know, you have heard the expression 'it doesn't come cheap, but they do a good job'*." Participant J (firm partner) mentioned the importance of CPS networks with different specialisms recommending others to achieve and demonstrate supply chain value to the ultimate client. He cited a recent example of a multidisciplinary CPS where "*Often they might be in a situation where they can benefit from it, get value from it*" with respect to recommending his firm for the delivery of a quantity surveying service package.

6.10. Normative commitment

The predefined sub-themes for normative commitment have been associated with feelings of 'obligation' and 'expectation' towards a CPS supplier, as well as 'guilt' motivating clients to continue using the CPS supplier. Evidence for its existence was found in only a few participants' accounts. No evidence at all was revealed for

a relationship between normative commitment and the propensity to give PWOM. Of the participants' accounts where normative commitment was present, it was associated with the obligation sub-theme. Participant D (firm director) maintained that, in the case of one client: "*I think they feel they have a moral responsibility that they feel obliged to use us*." Participant K (firm director) cited a similar example, stating: "*I have a long-standing client. ((pause)) I mean they are quite self-sufficient now, which gives me a lot of professional pride. They just use me to update them, to be honest. I mean, they keep me on, for which I am grateful*."

Of these few instances where evidence was obtained for normative commitment, this was accompanied by affective commitment.

> *"We have had a situation where we did have a consultant who didn't deliver the service very well, but we get on with them very well, and therefore we have been willing to overlook a few things to keep them on board, rather than getting someone with a higher skill set but maybe with not the same compatibility"* (Participant T, business director).

Similarly, Participant S (project manager) concluded: "*Yeah, I think the only time you would use obligation is where you were actually friends with somebody; friends outside of work. And then you might use someone even if they are useless! ((laughs))*."

The findings align with extant research, which shows that normative commitment is highly correlated with affective commitment, to the extent that the former is unlikely to exist without the latter (Keiningham *et al.*, 2015). Given the limited evidence for normative commitment being an antecedent for either repatronage or PWOM in CPS supplier-client relationships, it was excluded from the refined model.

6.11. Trust

Based on evidence from the business-to-business service literature (e.g. Dwyer, Schurr and Oh, 1987; Doney and Cannon, 1997; Morgan and Hunt 1994) and the professional service study of Ponder, Holloway and Hansen (2016), the *a priori* sub-themes developed for trust were 'benevolence,' 'reliability,' 'confidence' and 'integrity."

Most of the participants' accounts demonstrate that CPS-supplier trustworthiness is necessary to achieve client loyalty. Integrity and confidence-worthiness are strong sub-themes, with most participants deeming these to be important and associated with trust. Another aspect that emerged during the exploration of what trust meant to participants is the importance of having the 'client's best interests at heart.' This aligns with benevolence, which is the aspect of affective trust representing honourable intentions towards the other party (Ramaseshan, Rabbanee and Tan Hsin Hui, 2013). Several subjects in the qualitative study of Vafeas (2010) expressed being wary of trusting their professional service supplier due to concerns regarding being exploited. This is echoed in the evidence obtained from only the two least-experienced respondent clients. A lower degree of confidence in evaluating service quality could explain a reluctance to trust a supplier, given that an aspect of trust implies the tacit admission of vulnerability by the truster (Moorman, Zaltman and Deschpande, 1992).

> *"Do I trust them? No, I don't trust anyone! ((laughter)) They are there to provide a service for a fee. And they are in it to make money. It's my role to try and ((pause)) not* [make it] *so they don't make money, but to make sure we are getting a fair value service* (Participant O, deputy facilities manager).

6.11.1. Trust in key contact employees and repatronage intentions

Trust in the individual KCE was associated with repatronage intentions in the accounts of most participants. An absence of trust damages the personal relationship and likelihood of repeat business, as evidenced by Participant A (estates manager) stating: "*If you're not trustworthy, I don't want you on site*!"

As Participant D (firm director) suggested, "*If you want repeat business you have to care. You know, you can't be blasé about it*." There is evidence for the association of the 'client's best interests at heart' sub-theme with repatronage intentions in many of the participants' accounts. Data were coded to this sub-theme where individuals demonstrated conduct that transcends mere self-interest to the benefit of the client, as evidenced in the account of Participant E.

> *"You know, he might think, "You're the client and you're important to me, but you know what? I've got other things. If I did that, I'm not going to earn as much, but OK." So that's where I care about this guy. He's done me good, and the relationship might be an advantage. (.) If you are chasing aQS for something on the final account, and he is like, "OK, I've done the job, I've had my fees, I'm not interested in doing this," where would that take you? You know, I won't use them again!"* (Participant E, development manager).

Participant J stated that, as well as fulfilling the client's corporate objectives, it is important for KCEs to have care and concern for the other party's personal well-being, within the parameters of a professional relationship.

> *"Yes, we have a business relationship. No, we don't go out and see each other in sort of personal situations, but at the same time, you know you spend a lot of time with these people. You do have a vested interest in them, their well-being. […] One of my client's mother-in-law was ill; I was like, "What can I do? Don't worry about the fee. Is there something I can*

take off your plate? If you can't do that meeting, don't worry; I'll cover that. You go and do what you've got to do." (.) And that's just on a human level" (Participant J, firm partner).

The personal integrity of the KCE was associated with repatronage intentions in many participants' accounts. Participant D (firm director) mentioned honesty in context with both RICS rules for members and its importance from a client's perspective: "*If you don't know, be honest. You know, [say,] 'That's a very good question. I will find out and come back to you.' (.) But if you start talking rubbish, the client will soon see through that, so you have to be very careful*."

The accounts of Participant E and F demonstrate how important honesty and personal integrity were to them in terms of trusting the KCE and the propensity to award work to the CPS supplier in the future. These findings align with those of Johnson, Barksdale and Boles (2001), who found that trust operationalised via personal integrity is important in maintaining business-to-business relationships.

"You want somebody who is honest and [has] got integrity, ((pause)) [is] keen to get it right and resolve it for you. Because imagine you have got a construction site and something's not right. Where do you start? […] The construction industry is full of uncertainty. You've got to be honest, (.) straight in your communications. [Put your] Hands up if there is an issue, because then people can react, and you respect that person" (Participant E, development manager).

"They've got to be honest. You know, I don't mind the odd excuse, because I understand that everyone can get overloaded and overcommitted, but at the same time, just be truthful. Tell me the truth. You know, don't give me some bullshit excuse. OK, it might upset me or piss me off, but at least he is being honest. Deal with it!" (Participant F, project manager).

The rational aspects of trust are perceived reliability and confidence in another party. In the context of the KCE, these were also associated with repatronage intentions in most participants' accounts. Given the risks involved when delivering CPS, clients expressed the importance of having confidence in the KCE. Belonax, Newell, and Plank (2007) argued that KCE credibility is fundamental in business-to-business service relationships. To achieve repeat business, the participants' accounts demonstrate that the client must have confidence in the KCE.

> *"You see, you need the client-facing people who you deal with, the key account manager – [or] whatever you want to call him – you need to, erm, get on with them, have confidence and trust in them. […] He's got to basically convince you that you've got a safe pair of hands looking after your work, and a reliable set of hands who will deliver as promised"* (Participant F, project manager).

When asked about what, in his experience, leads to repeat business, Participant J stated: "*I think there is pretty succinct answer, and its trust*." He supported this with an example of a client awarding him a commission due to personal confidence: "*Yesterday, a client phoned up and [was] talking about a contract administration role. […] He is like, 'If you have to do it, I know <u>you</u> can do it,' and that's what I think it comes down to. Trust*."

6.11.2. Trust in firms and repatronage intentions

Evidence was found in many participants' accounts for trust in the firm collectively and its association with repatronage intentions. Participant J (firm partner) argued that it is important for a firm "*to go the extra mile to resolve the issue. That's a big part of it because they know if they are in a difficult spot, they know that you are going to be there supporting them*." The accounts of both client and CPS suppliers align in this respect.

Participant B (developments manager) explained: "*They deliver on what they say. If they send something through and you're not happy about it, they attend to it. They demonstrate they care, and I know this is very subjective, but it's about them showing that they care.*"

In common with trust in the KCE, the evidence for the 'client's best interests at heart' sub-theme extends to the firm level, as demonstrated in the account of Participant D (firm director).

> *"So why does he like us? I think because of the long-term relationship we have got with him and, erm, we've also been a good listener. Like when he has been under stress and we have put our arms around him to try and help him and remediate the pressures he's experiencing with his employer"* (Participant D, firm director).

Evidence was found that clients perceive integrity at both a firm and individual level. Participant B (developments manager) stated: "*I wouldn't be signing any orders if I thought that any organisations would not act in professional manner*." This demonstrates that the collective integrity of individuals within a firm is a prerequisite to achieving repeat business. The report of Participant G illustrates the powerful negative impact on repatronage intentions in the event of a perceived breach of trust and lack of integrity of the CPS firm collectively.

> *"I can give you a specific example. I was being misled by some botched work, and instead of coming clean, they tried to cover it up. It was at [the] design stage. I remember it quite clearly. They had messed up a footprint of a property, so to hide it, they shrank the beds of the PDF on the drawing to make it appear bigger to the naked eye on the plans. It's only when you started setting [it] out on the ground that you realised that this wasn't going to work at all. So those people got dropped immediately and were very lucky to escape legal action. And if I had the funds behind me that I have*

now, I would have pursued them. That gets my goat. Not many things get me angry, but that is a blatant breach of trust, and it was fundamentally dishonest as well" (Participant G, property developer).

Trust, in terms of confidence and reliability, and its association with repatronage intentions was revealed in many participants' accounts. Participant E (developments manager) argued that the reliability of the firm is very important, stating: "*I mean, what's the point in promising and not delivering? We wouldn't use them again*!" Participant H also felt that the collective integrity of the firm is important.

"I mean they have RICS standards as well, so they have got an ethical and moral standard. At the end of the day, they are there to represent us, so I think more when it gets contentious is on dilapidations when they are having to deal with another party, whereas [on] a shop fit they are only dealing with us. They have to get involved with another party and negotiate. I have to feel they are trustworthy in what they are telling me and that I'm getting good advice, and I've never had any reason to believe that is not the case" (Participant H, property manager).

Confidence in the firm and belief in the firm's reliability develops over time, as evidenced by Participant G (property developer), who explained that "*track record is a massive part of it. If you have dealt with someone on a number of projects, you can use a balance of probability, almost like a believability matrix with [the] number of jobs versus issues along the way.*"

Expertise was deemed to be important and was associated with repatronage intentions in most participants' accounts. Participant A (Estates Manager) explained that one of the main reasons he continued to use the services of a favoured CPS supplier was "*their knowledge, their expertise*". The account of Participant B (developments manager) demonstrates that it can be so important

that it warrants circumventing standard reprocurement processes: "*Let's just stop and think, 'Who would I go to one this one?' Then you know I would go the head of estates development and say, 'I think we should do this by a waiver, because in my experience and opinion, they are the appropriate people*.'"

Versatility was considered less important CPS than domain expertise in most participants' accounts. Participant G (Property Developer) stated that: "*I don't want a jack of all trades; I want a specialist. If, say, I'm employing a QS, I want him to be an expert in what he is doing*." Participant J (firm partner) even suggested that domain expertise was an important part of his firm's business strategy, using it to differentiate them from their large, multidisciplinary CPS competitors: "*We offer ourselves as a quantity surveying practice, and that's what our clients want. You know, they don't want a quantity surveying practice that can also do architecture, that can also do engineering, x, y and z*."

Participant Q (project manager) confirmed that "*the professional practices have got to been seen to being experts in their fields. […] I think clients should be interested to know that practices are updating their knowledge, speaking at conferences, so you think they are keeping on top of things*." Such evidence aligns with the principle of "*thought leadership*" (Harvey and Mitchell, 2015, p. 9). This signals that suppliers are also contributing to the development of professional knowledge, such as providing input on technical standards and speaking at continuous professional development events in association with professional bodies. As well as professional knowledge, the client respondents valued practical expertise. Several clients bemoaned the apparent lack of practical experience possessed by some CPS suppliers, with Participant S (project manager) stating: "*You know, they go all the way through their education without actually really understanding anything*."

In summary, evidence was found for a relationship between trust (on both the personal (KCE) and organisational (firm) levels) and repatronage intentions. Furthermore, the data suggest that a lack of trust at either level damages the likelihood of repeat business.

6.11.3. Trust in key contact employees and positive word of mouth

Personal reliability and confidence in the KCE were associated with PWOM in many of the participants' accounts. Participant G (property developer) expressed a willingness to recommend an individual "*if they are good to their word*". Some clients appeared unwilling to recommend a CPS supplier unless there was a particular employee that they had confidence in. Participant T (business director) declared that they would only recommend a CPS supplier where "*we have had a good experience. We would only recommend someone who we feel they would be in safe hands with and have a good experience, and that the person would deliver on whatever ((pause)) whatever problem the person has*." Participant R (developments manager) expressed a sense of confidence in individuals due to them being professionally qualified. This positively influenced her propensity to give PWOM due to them being "*affiliated to professional bodies, you know RICS or whatever.*"

In common with many participants, Participant A (estates manager) had passed on details of both KCEs and firms when making recommendations to others, detailing that this was due to their "*good experience of the work they have done. Generally, the company, but I have steered them to individuals. You know, [saying,] 'Give so and so from so and so a call*.'" These findings conflict with Rauyruen and Miller (2007), who posited that no relationship exists between trust in the KCE and PWOM. However, the context of that study was in less-relational, lower-risk business-to-business services.

Due to the knowledge-intensive and relational nature of CPS, the trustworthiness of the individual KCE is likely to be even more influential for clients when making recommendations than it is in wider business-to-business markets. A minority of participants expressed a sense of perceived personal risk when making recommendations. Individual trustworthiness appears to be necessary to alleviate this sense of risk. By way of example, Participant P (facilities manager) stated that "*they have to be trustworthy for you to put your name to it. I wouldn't like to put my name to someone who I thought might do a bad job.*"

6.11.4. Trust in firms and positive word of mouth

Trust, in terms of clients believing that CPS firms collectively have their best interests at heart, was shown to have also been influential when determining whether a CPS supplier merits recommendation. Participant I (estates surveyor) gave an example where they had recommended a CPS because they had "*helped me out when I needed them*".

Reliability and confidence in the firm collectively is important to clients when making recommendations. Participant B (developments manager) gave examples of where he had recommended firms that "*have demonstrated a track record*". Participant G (property developer) stated: "*If I know a number of individuals in a firm who are all competent and diligent, then I would recommend them*." Participant F (project manager) explained that it was important "*that they deliver and can be trusted to deliver*" before he would recommend a CPS firm. Participant B (developments manager) expressed the view that collective credibility and professionalism make a CPS firm worthy of recommendation. He cited a recent example where he directed PWOM towards the company rather than the individual: "*I think the guys who are now in their forties have learnt from what you*

would regard as crusty, old professionals and they have been instilled [with] these professional values."

A firm's collective track record of delivering projects successfully influences the propensity of clients to recommend them to others. Participant J (firm partner) suggested that "*If you go onto our website, you see the calibre of our projects and what we have delivered*."

6.12. Service quality

Perhaps unsurprisingly, based on the findings of the literature review, evidence obtained from all the participants suggests that service quality is a key antecedent of client loyalty. The association between CPS quality and loyalty in business-to-business markets was described succinctly in the account of Participant E (project manager): "*You know, everyone, ((pause)) they all need to understand it's about maintaining a good quality of service throughout and until the end of the project? Why? Because it will lead to repeat business! It's a simple formula*!"

The analysis delineated aspects of perceived service quality and their association with client loyalty. This included *how* the service was delivered (functional quality), *what* was delivered (technical quality) and communication quality.

6.13. Functional quality

Functional quality has been operationalised by concepts such as responsiveness, flexibility and courtesy (e.g. Sharma and Patterson, 1999; Doney, Barry and Abratt, 2007; Sarapaivanich and Patterson, 2015). In this context, courtesy represents the participants' view of CPS suppliers' conduct during service delivery, as opposed to the more emotional sentiment of 'liking' associated with affective commitment. The most frequently occurring sub-theme of functional quality in the

respondents' accounts is 'responsiveness,', which is represented by reactiveness, speed of delivery and meeting deadlines.

No evidence was found that functional quality operates on distinct KCE and firm levels. Therefore, it was refined to a single target-neutral theme. Furthermore, later on during the coding process, 'courtesy' was deemed too conceptually similar to 'likeability' and so was merged into this sub-theme of affective commitment.

6.13.1. Functional quality and repatronage intentions

Functional quality was associated with repatronage intentions in many respondents' accounts. Participant D (firm director) mentioned the importance of completing surveys in line with client-required timescales in order to obtain repeat business, stating: "*If the client turns around and says, 'That's not acceptable; I want it done in half the time,' me being a yes-man […] I will go to [the] four corners of the Earth to make that happen*." The flexibility and degree of urgency with which CPS suppliers treated escalations from clients is associated with repatronage intentions in many of the participants' accounts. Participant H (property manager) explained: "*If you get emergency-type calls, be prepared to drop everything. Erm, OK, it might be you are late home one night, but in the scheme of things, if you have got to go out tendering to 10 other people, you are going to be back late anyway.*"

As well as reacting to escalated requests, responsiveness during routine service delivery was also important. Participant E expected CPS suppliers to be proactive throughout the process of service delivery.

> *"It's about meeting deadlines. […] Are you an important client or not? And that would be reflected in terms of meeting your deadlines, listening to you, reacting to what you want. […] Or sometimes [they'd say], "I don't mind what something will cost, but I need this now! Can you resource it?" […]*

You can't turn up to meetings and say, "Oh, I haven't done this yet" or "I'm still looking into that" or "I'm going to do a survey today". That's the best one, where you put them on the spot, and they go, "I'm on site today; I will look at it." No! No! You should have come before and given an answer at the meeting! Not the other way around! (Participant E, project manager).

The account of Participant J demonstrates the importance of responsiveness and flexibility in gaining repeat business, by contrasting the behaviour of ex-colleagues at a former employer with the attitudes he expected of the employees in his own practice.

"If a client phones up and says, "This isn't right" or "That hasn't been done", you don't sit there or say, "Where is my purchase order?" or "This is a variation to my scope"; that's not how it works. You say, "Yes, of course", and you sort it out at a later date" (Participant J, firm partner).

Overall, the participants' accounts support extant research, which illustrates that the way in which the service is delivered (functional quality) is associated with repatronage in a professional service context (Palihawadana and Barnes, 2004; Slapnicar, Groff and Stumberger, 2015) and wider business-to-business markets (e.g. Gounaris, 2005).

6.13.2. Functional quality and positive word of mouth

The responsiveness aspect of functional quality was most strongly associated with PWOM in participants' accounts. One of the reasons Participant A (Estates Manager) recommended a CPS supplier was their responsiveness to his requests, stating that "*They will come in, in a reasonable time. I haven't got to wait until next month to see them*." Other examples included Participant E (project manager) making a recommendation to a colleague because "*They stuck to their deadlines*."

Participant I (estates surveyor) cited an example of a CPS supplier he had recommended to others because they "*reacted when I needed them to*" with respect to several urgent survey requests. The importance of general proactiveness was considered an important aspect of functional quality, with Participant F (project manager) explaining that he recommended a CPS supplier because "*I'm not having to chase them*." These findings align with the professional service study of Eisingerich and Bell (2007), who identified a positive relationship between functional quality and a mixed-loyalty construct mainly composed of PWOM items.

6.14. Technical quality

A strongly occurring sub-theme of technical quality found in most participants' accounts is the provision of advice that 'helps me achieve my goals.' This has been used to define and operationalise technical quality in other professional service studies (e.g. Sharma and Patterson, 1999; Eisingerich and Bell, 2007; Sarapaivanich and Patterson, 2015). Another emergent sub-theme associated with both repatronage intentions and PWOM is 'understands my needs.'. After deliberation and examining respondents' views of service quality, it was positioned as a sub-theme of technical quality, given that understanding a client's needs in a CPS context is fundamental to *what* is delivered rather than *how* it is delivered. Furthermore, it is inextricably linked to the technical quality sub-theme of 'helps me achieve my goals.'

An emergent sub-theme that many participants also felt was a core element of quality (but was not used to operationalise technical quality in most other professional service studies) is 'meticulousness.' The emerging prevalence of this aspect aligns with Prakash and Phadtare (2018), who included meticulousness in their architectural-service-quality scale. No evidence emerged for technical quality

operating separately at both KCE and firm levels. Therefore, it was refined into a single target-neutral theme.

6.14.1. Technical quality and repatronage intentions

The sub-theme 'understands my needs' was associated with repatronage intentions in many of the respondents' accounts. Participant O (deputy facilities manager) favoured a CPS supplier in preference to others because "*They understood our requirements better. It was a two-way conversation*." Participant A (estates manager) argued that understanding the client's needs is a vital aspect of gaining repeat business, and advocated CPS suppliers to "*Listen to the customer! Listen to what they have to say and read the specs*!" Participant C (project manager) gave an example of where he ceased using a CPS supplier because "*They didn't listen and didn't understand what we were trying to achieve!*"

Many participants felt a core aspect of service quality is helping them to achieve their goals. One aspect of this is understanding the client's needs. Participant I (estates surveyor) expressed a desire to continue using the services of a CPS supplier due to its "*experience and knowledge of what I am trying to achieve*". The account of Participant J demonstrates that the provision of advice that helped clients achieve their goals was associated with his firm winning further business and retaining the client's accounts.

> *"Two or three months went by, and all of sudden, the phones started ringing – you know, talking about their problems – and they are asking us, "Why are we not getting this advice?" And we were like, "We can't tell you" (why they weren't getting it from their incumbent guys). And sure enough, it was soon, "Can you look at this?"* (Participant J, firm partner).

Business-to-business clients of CPS firms are likely to have several potentially conflicting needs. Participant T gave an example of a CPS supplier she appointed

to achieve an effective balance of project goals. Problem-solving ability was an important aspect of CPS quality in many respondents' accounts.

> *"They've got their consulting engineers coming in with all these fancy ideas as to how this could be built, and then we turn to [them] and say, "Thank you for sharing; now how are we actually going to do this thing?" You know, come up with something that will cost half as much, deliver the same thing, probably better from an environmental perspective, halve the programme; you know, time is money. […] So they have got to give us a solution and not just a problem"* (Participant T, business director).

Evidence obtained from most participants' accounts suggests that meticulousness is a vital aspect of service delivery, particularly with respect to tangible outputs. Many participants expressed the view that a lack of meticulousness from a CPS supplier was immensely frustrating. Participant F (project manager) stated: *"*You might get a CAD drawing and the view ports aren't locked. They could have done it this way or that way, and you think: *"You know what, these are no good*!'" The impact of lack of meticulousness on repatronage intentions is starkly illustrated by the comments of Participant B (developments manager), who said: "We see a lot of work, and it's like, '*Why have you done that?" You know, there's no quality assurance checking. I won't quote examples, but there is an M&E [mechanical and electrical] consultancy (.) and, collectively, I would say they will <u>never</u> work here again.*" The same participant gave another example, this time regarding quantity surveying services. This suggests that meticulousness influences repatronage intentions, not just in design professionals but over a wider range of CPS sub-disciples.

> *"The quantity surveyor sent a cost report, and I looked at it before the meeting. (.) I said, "Don't present the detail of the report. Turn to page one, the summary," and it was like four rows of numbers. And I said, "Just do*

those numbers," and it was wrong. I said, "We're not talking any more about this. The meeting is over." You know, [meaning] 'I'm not interested in anything in that report.". And the guy who was the client-facing member of the cost-advising team looked around at his colleague as if to say, "Wait till we get out of this meeting and I get you back to the office!" We see this so often. People talk a good shop, but it's about delivery" (Participant B, developments manager).

Meticulousness is tied in with achieving clients' requirements for delivery on time and with cost certainty, as evidenced in the following account:

> *"We still have problems on site because things have been missed. Normally, the consultant has been lazy, [and] should have been finding out mistakes in the information or doing additional surveys to close off the information and give us certainty, because I appoint the guys to give us certainty. Not for things to be decided on site during construction. That's not what I want"* (Participant E, project manager).

6.14.2. Technical quality and positive word of mouth

Many participants expressed the view that a CPS supplier having a high level of technical quality warrants their endorsement. Participant C (project manager) recommended a CPS due to "*their ability to deliver the design as requested*". Participant K (firm director) said that much of his work was repeat business, achieved due to the core service of solving problems. To get recommendations from clients, he advised that: "*If there are problems, be pragmatic. If there are legal issues, I mean things happen, but as long as you've got a plan to get out of it. In my experience, it's about solving problems for people*." Participant L (housing

and corporate asset manager) stated that she recommended a CPS supplier to another client because they "*did their best to deliver what we needed them to deliver*". The account of Participant B illustrates that core quality (which is closely aligned to the expertise aspect of trust) is associated with the likelihood of receiving recommendations.

> *"There's another one I have recommended who are very good at post-contract traditional quantity surveying. Really good – experts in that sort of thing. They are a smaller practice, and I think those smaller practices have still got the old-fashioned training routes. And most of the staff have been there since they were young guys, and they are still there as old chaps"* (Participant B, developments manager).

The perceived ability to demonstrate an understanding of clients' needs was mentioned as a reason for making a CPS supplier worthy of PWOM by many respondents. Participant I (estates surveyor) stated that: "*If they have delivered a quality service, listened and done what I asked them to do, […] I will always recommend them*." Participant B gave an exemplary example of a CPS supplier that he had recommended on this basis.

> *"It's people that shows their learning lessons. There's one particular [firm] who I would have no hesitation in recommending. They listened to us, and then learnt the lessons from project A and applied them to project B. Learnt more lessons from project B and applied them to project C. It's about people who listen"* (Participant B, developments manager)

6.15. Communication quality

Extant research demonstrates that effective communication is an important attribute for professional service suppliers. The ability to clearly articulate difficult

concepts reduces information asymmetry, which then leads to client loyalty (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015).

During this research, the evidence suggests that information asymmetry did not present a challenge to most client participants. Some expressed confidence in their own abilities and knowledge to evaluate technical quality. For example, Participant B (developments manager) stated that: "*I've got enough experience to judge whether what we are being given or what we are hearing is credible and genuine.*" Alternatively, some clients had developed coping strategies where they felt their own knowledge was lacking. This included consulting the wider project team, as evidenced by Participant C (project manager), who stated: "*If I'm asking a team of designers collectively, between us all, we will shake out the right conclusions, through in-house knowledge and cross conversations*." Another way of overcoming difficulties in evaluating technical information and CPS suppliers is the use of professional networks, as evidenced by Participant A (estates manager), who confirmed: "*You build up a network of friends and colleagues, and ask, 'What have you done about this? How are you complying with that? Who do you use for this*?'" These findings should be explained in the context of the participants, with all but one being graduates and several possessing CPS qualifications and experience. Many participants demonstrated a sense of responsibility to evaluate CPS quality on behalf of their organisation. This is evidenced by Participant I (Estates Surveyor) explaining that "*I've learnt over the years that we need to do a lot of background investigations first and bring yourself up to speed. It's very easy to get the wool pulled over your eyes*."

Most client participants expressed confidence in their ability to evaluate CPS suppliers. However, the quality of CPS-supplier communication remains important. The sub-theme 'explains things meaningfully' features in many accounts, demonstrating that the clear and effective communication of advice is important,

even to clients with a technical understanding of the service delivered. It was apparent that most client respondents were actively involved in the scoping of the services. This supports the principle of service-dominant logic theory (Vargo and Lusch, 2004) that services are co-created by client and supplier via the processes of joint communication and interaction. It also accords with Lowendahl (2005, p. 18), who argued that professional services are delivered via "*the interaction between knowledgeable clients and highly educated service providers who engage in some form of joint problem-solving activity*". The evidence also implies that participants viewed personal communication as something that happens interchangeably between individuals and collectively as part of the project team. Therefore, communication was refined into a single target-neutral theme.

6.15.1. Communication quality and repatronage intentions

Whilst most respondents appeared confident in their ability to evaluate CPS suppliers, an association was found between the sub-theme 'explains things meaningfully' and repatronage intentions in many respondents' accounts. Participant K (firm director) felt that the ability to "*demystify it and make it very achievable*" resulted in repeat business. Participant M (assistant property manager) stated that one of the things she looks for in CPS is "*Where you need advice, it's been what you need, clearly explained*." Participant C (project manager) obviously valued "*that extra bit of information, good information, information that will reflect in a better design, a better outcome*". Participant S believed that the inability to communicate technical information is a significant negative factor that would disincline him to use the services of the CPS supplier in the future.

> *"A lot of the better ones will use descriptive language and not, you know, initials of stuff. You can get someone who can give you chapter and verse.*

[…] They always come unstuck. I had one not long ago and, right away, I clocked him. Sharply dressed. Far too much terminology and technical speak" (Participant S, project manager).

In their professional service study, Sharma and Patterson (1999) partly operationalised communication quality based on how effectively the pros and cons of different options were explained. This appears as a sub-theme associated with repatronage intentions in many of the participants' accounts.

"They want me to ring them and say, "Right, here is the situation, here is the problem, this is what we can do to deal with it, here the short-term solution, here's the long-term solution. If you do a quick fix, it will cost you this, but in a years' time, you will have to pay again." Therefore, I like to give an option to totally eliminate the risk" (Participant D, firm director).

They might say, "We can do this and its x cost," or they might come back and say, "You can do that, but there is an alternative." I'll be looking at that one more often, because he has given me alternatives and he has been prepared to listen to what I want" (Participant I, estates surveyor).

"If it's a client without much experience, it wouldn't just be prepare it, send and, "There you go. I've done it." It's about sitting down with them, going through it with them, like, "This is this, these are the risks, these are the opportunities, this is why we are doing it, the ultimate recommendation is this" (Participant J, firm partner).

Another commonly occurring communication quality sub-theme that most participants felt important is "*keeping the client updated*" throughout service delivery. Participant F stated, "*I can't stand companies who you never hear from until you chase them.*" Participant E (project manager) expressed similar frustrations about a CPS supplier failing to update him, asking them, "*Why don't you keep me informed? I've asked you to my progress meeting; why didn't you*

attend? Why didn't you send an interim report?" Communication quality is associated with being straightforward and providing regular updates.

> *"So, it's managing expectations and managing problems. I saw a good quote somewhere: "We can deal with bad news; it's no news we can't deal with." So even if things have gone pear-shaped, by being up-front, I suppose that's a level of professionalism by owning up [that] "We have had a problem; it's going to be delayed"* (Participant S, project manager).
>
> *"It's managing expectations. You know, communicate! Come and talk! […] People don't mind waiting for something if they believe it; if there is an end date to this or some action on what's happening, they can be patient. But if you tell them nothing, that's when they get upset. That's when I get the complaints"* (Participant A, estates manager).
>
> *"The age that we now live in, you can't escape by saying, "I'll come back to you." The clients are more demanding and want answers. You've got to give them a timeline. If you say, "I'll sort that out for you," they are not going to say, "OK, great." They are going to say, "OK, when?" […] It's no good taking an instruction and then them having to chase you […] [saying,] "When are you going to do it?" The moment you start making those signs, the client is going to go away from you. What the client wants is a positive outcome and positive attitude: "This is what we are going to deliver for you, this is how we are going to deliver it, these are the timescales we are going to do it in"* (Participant D, firm director).

6.15.2. Communication quality and positive word of mouth

Evidence was found in many respondents' accounts for the association of communication effectiveness with the client's propensity to give PWOM. Participant R (developments manager) felt that CPS suppliers that "*keep you*

abreast of the process" were worthy of recommendation to others. Participant B (developments manager) stated that "*communication is important*" in CPS supplier-client relationships, mentioning it in context with the reasons why he would recommend a supplier to colleagues or people in his professional network.

Evidence in many of the participants' accounts implies that the ability to explain concepts clearly and meaningfully is associated with PWOM. Participant K (firm director) explained that his firm had received recommendations due to an ability to "*make things quite easy for clients […] explain things*". The ability of CPS suppliers to explain technical content clearly in an understandable but non-patronising way was deemed to be an important differentiating factor and was mentioned as a reason why a CPS supplier may be recommended.

> *"They understand where you are coming from and, likewise, you understand what they are having to say. In some sense, they might be dumbing it down, so I understand it because it's their specialist area and they are talking at a level [that's] appropriate. We are talking on the same level, but he is getting his technical knowledge and explaining it"* (Participant A, estates manager).

6.16. The refined model

The findings of the qualitative analysis were used to refine the conceptual model developed during the literature review. The refined model is presented in Figure 6-3. Except for locked-in commitment, the antecedents were associated with both PWOM and repatronage. The analysis also demonstrates that locked-in commitment, affective commitment and trust operate at both KCE and firm levels. Value-based commitment, functional quality, technical quality and communication quality were collapsed into single level-neutral themes. Normative commitment

was removed from the revised model, as insufficient evidence was found for either its existence or influence on repatronage and PWOM.

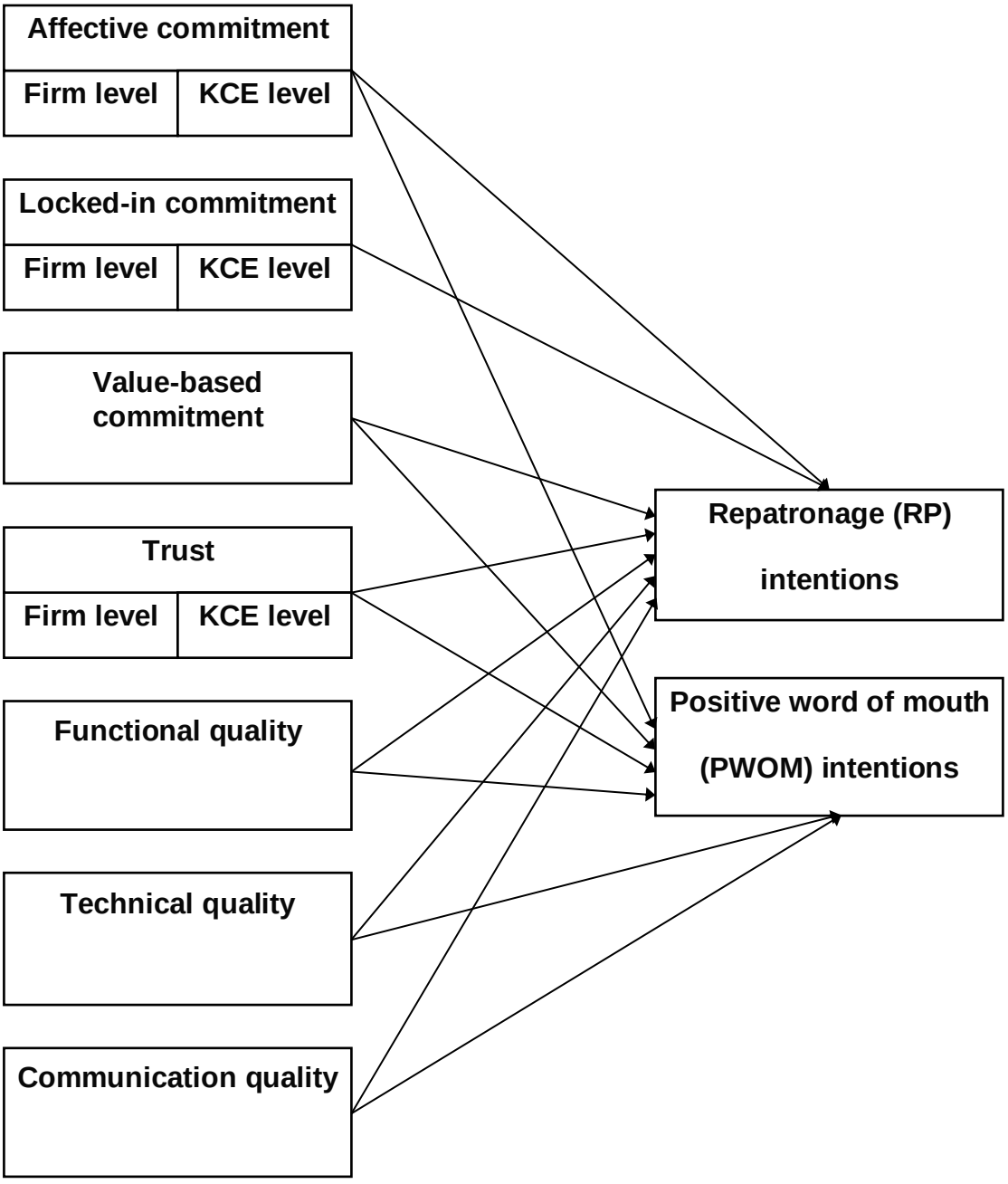


Figure 6-3. The refined CPS-client-loyalty model.

6.17. Model amendments necessary for quantitative follow-up research

Before moving on to the quantitative phase of the research, the themes that operated at both firm and KCE levels (affective commitment, locked-in commitment and trust) were rendered down to single-level predictor variables. This was necessary for several reasons. The themes identified during the qualitative phase of the research needed to be converted into predictor and outcome variables. It was likely that some (or all) of the multilevel conceptualisations of the same variable would be so highly correlated that they would have resulted in multicollinearity, which is a potential problem discussed in detail in Section 6.8. Furthermore, without reducing the number of independent variables, an unrealistically high number of cases would have been required to achieve sufficient statistical power and generalisability. Hair *et al. (*2014) advised researchers to use the most parsimonious set of variables to test a theory, guided by practical considerations, to obtain a sufficiently large sample size. Finally, an even longer question set would have been required, which could have decreased the survey response rate.

The evidence for PWOM and repatronage being empirically distinct is relatively weak. Most participants recommended a supplier to which they had expressed a high level of repatronage loyalty. Notwithstanding this, it was considered premature to merge these constructs at this stage. Figure 6-4 shows the model of CPS-client loyalty that was subject to quantitative testing. The dimensionality and reliability of the constructs was to be tested during the quantitative analysis detailed in Chapter 7.

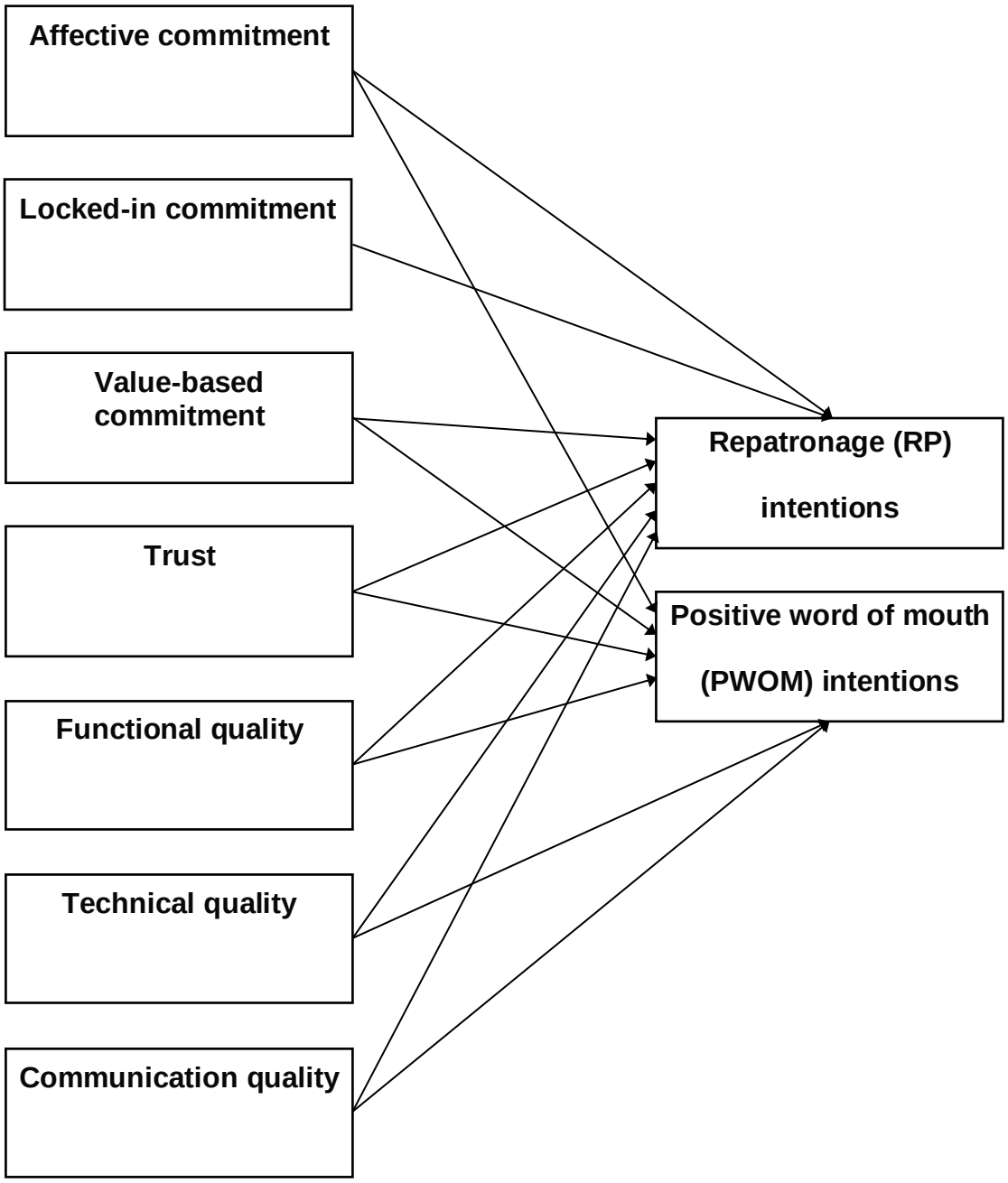


Figure 6-4. The CPS-client-loyalty model subject to quantitative testing.

6.18. Chapter conclusion

Several important findings were obtained during the qualitative phase of the research. Firstly, evidence obtained from most respondents supports the decision to study CPS collectively. Even though CPS sub-professions service different client needs, there is a core set of antecedents of client loyalty that are common to all. Additionally, despite the technical complexity and opaque quality of CPS,

clients are to be confident in evaluating the services delivered to them. This suggests a relatively low degree of information asymmetry between CPS suppliers and business-to-business-sector clients.

Evidence suggests the individual clients of CPS suppliers have a high degree of influence over the decision to continue or terminate the relationship. This supports the rationale for concentrating on the attitudes of individual clients to determine the likely future supply chain decisions of their employing organisation.

Pattern analysis supports most of the theorised relationships between the key-candidate service-related antecedents in the conceptual framework. The main exception is normative commitment, which is associated with moral obligation and sentiment. Very little evidence was found for this in CPS supplier-client relationships. Therefore, it was removed from the conceptual model.

Evidence was obtained that implies that three of the antecedents impacting upon client loyalty operate at both KCE and firm levels. These are affective commitment, locked-in commitment and trust. Insufficient evidence was found that value- and quality-based antecedents impact on client loyalty at both KCE and firm levels. Before moving to the quantitative phase of the research, all antecedents were refined to single level-neutral themes. This was necessary for practicability and statistical-validity reasons. Chapter 7 details the results of the quantitative research phase, during which the strength and significance of relationships between the refined group of antecedents and loyalty were tested in a wider population.

Chapter 7. Quantitative analysis results

7.1. Chapter introduction

Chapter 7 describes the findings of the multivariate analyses used to test the strength and significance of relationships between the predictors (antecedents) and outcome (loyalty) in the wider population. 'Multivariate analysis' refers to all the statistical techniques that analyse more than two variables simultaneously. Such techniques are commonly used in built environment and construction management research (Fellows and Liu, 2015).

The Chapter begins with a summary of the population characteristics and descriptive statistics. Details are provided of the data screening carried out for statistical-validity purposes. Following this, the results of the factor analysis are presented, which was undertaken to examine the structure of the predictor and outcome variables. The results of the analysis of the reliability of the variable-item data is also provided.

The results of the factor analysis established the final set of constructs. At this stage, it was appropriate to state the hypotheses regarding the relationships between predictor and outcome variables. The results of the hypothesis testing using multiple regression are provided, along with exploratory statistical and diagnostic tests to help validate and then explain the findings.

7.2. Population characteristics and descriptive statistics

7.2.1. Response rate and sample size

Of the 455 questionnaires distributed as part of the main survey, 121 were returned, representing a 26.6% response rate. No modification had been made to item wording following the pilot study. Furthermore, the pilot-study respondents

had been excluded from the main study sample frame. For these reasons, it was deemed acceptable to add the pilot-study cases to the main survey sample to maximise the total number of cases for subsequent analysis. Therefore, 136 cases were obtained in total, which represents an overall response rate of 26.9% (Table 7-1). This is a reasonable return when considered in context with the average of 25–35%, which can be expected in built environment survey research (Fellows and Liu, 2015).

Table 7-1. Survey response rate

	Distributed	Received	%
Pilot study	50	15	30.0
Main survey	455	121	26.6
Overall	505	136	26.9

As detailed in Chapter 5, the minimum sample size required for hypothesis testing using multiple regression analysis was calculated at 106, based on the formula provided by Pallant (2016). Notwithstanding the subsequent results of the data screening, the number of cases returned was sufficiently large to proceed with the statistical analysis.

An assessment was undertaken to ensure that the sample size was sufficiently large to achieve sufficient statistical power. In the context of multiple regression analysis, ‘power’ refers to the probability of detecting statistically significant levels of R^2 or a regression coefficient at a specified significance level. A small effect value was assumed in the calculation to reduce the risk of a Type II error. A small effect size is represented by a value of 0.2 (Field, 2018). G-Power v3.1.9.4 was used to calculate the power achieved using the number of cases obtained. For a multiple regression model with seven predictors and a sample size of 136, the

calculated chance of detecting an R^2 of ≥0.2 is 98%, a level considered to be sufficiently powerful for the research.

As well as its role in determining statistical power, sample size also affects the generalisability of results. The sample size of 136 achieved is well over 20 cases per predictor variable, which is the ratio above which results can be generalised to the population, assuming that the sample is representative (Hair *et al.*, 2014).

It was also necessary to consider the suitability of the sample size for the purposes of factor analysis. There is a lack of consensus with respect to what sample size is sufficient for this technique. Furthermore, there are several methods for determining sample-size adequacy. The number of cases does not meet the recommended ratio cited by Field (2018) of between 10-15 cases per question item, given that there are 45 items in the questionnaire. Other sample-size estimates use total number of cases in the dataset. The 136 cases obtained is only slightly below the 150 cases recommended by Pallant (2016) and is above the value of 100 regarded as acceptable by Newsome (2018).

As well as the number of cases obtained, the factor-loading pattern can be used as a means of determining sample-size adequacy. All resultant factors have at least four items loading >0.6, which suggests a reliable factor solution. All communalities are >0.5, with all but two being >0.6. Field (2018) stated that the sample size is likely to be sufficient where item communalities are all ≥0.5 in data sets of between 100-200 cases. On this basis, the sample obtained was sufficient for the purposes of achieving a reliable factor solution.

7.2.2. Respondent characteristics

Nine of the 16 UK business sectors listed by the Office for National Statistics (2018b) are represented in the sample (Figure 7-1). This supports the view of Boyd and Chinyio (2006), who stated that construction clients operate from within

a wide variety of different business sectors. The largest single segment (32%) of CPS clients relates to those self-reporting as working in the construction sector. However, this is likely to be an overestimate, given that some respondents had clearly answered this question from the perspective of the role they fulfilled within their organisation, as opposed to the core sector category of their employing organisation. Therefore, the actual sector representation may be even broader than is apparent in the reported results summarised in Figure 7-1. Overall, the sector profile represented in the survey is a reasonable industry cross-section, given the constraints and difficulty associated with accessing the population.

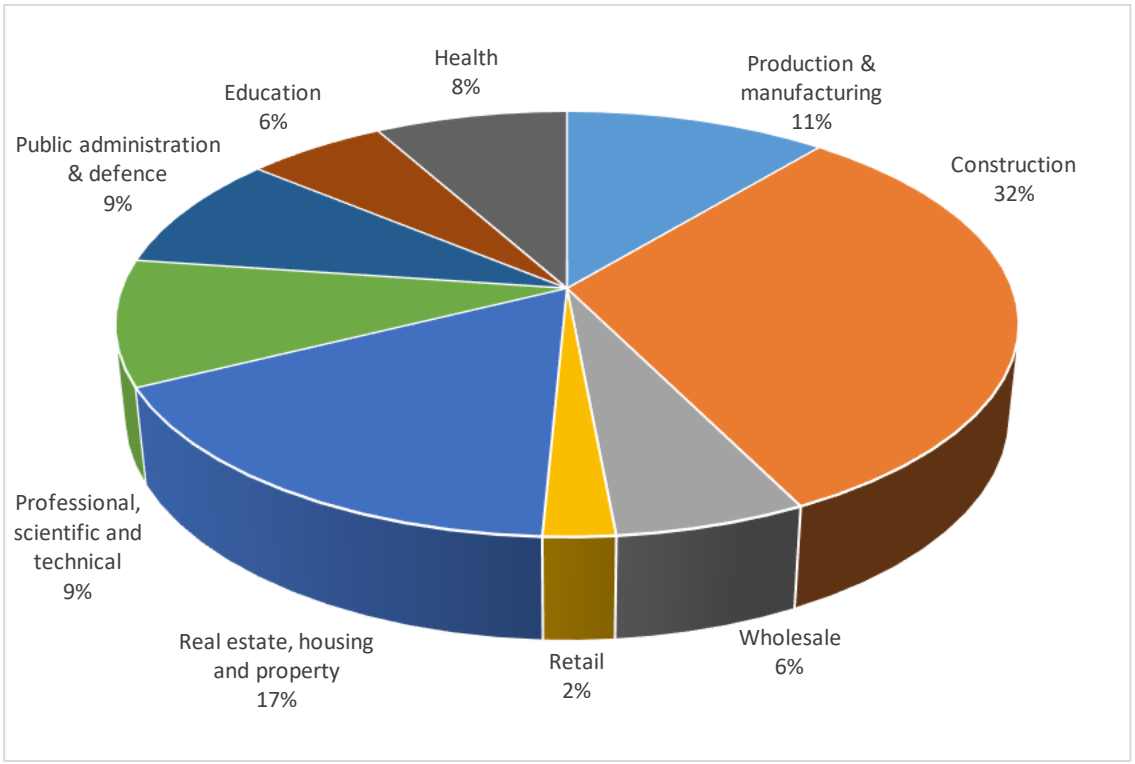


Figure 7-1. Survey respondents (CPS clients) by employment sector.

Most survey respondents were employed by medium-sized or large employers (Figure 7-2). No respondents employed by microbusinesses are represented in the survey. The reasons for this could not be explored empirically. However, it is probably a result of the lower accessibility of micro-business employees, resulting in them being underrepresented in the sample. Furthermore, it has been

suggested that people working in smaller businesses are even less likely to respond to surveys than people employed by larger organisations (Blanchflower and Shadforth, 2007).

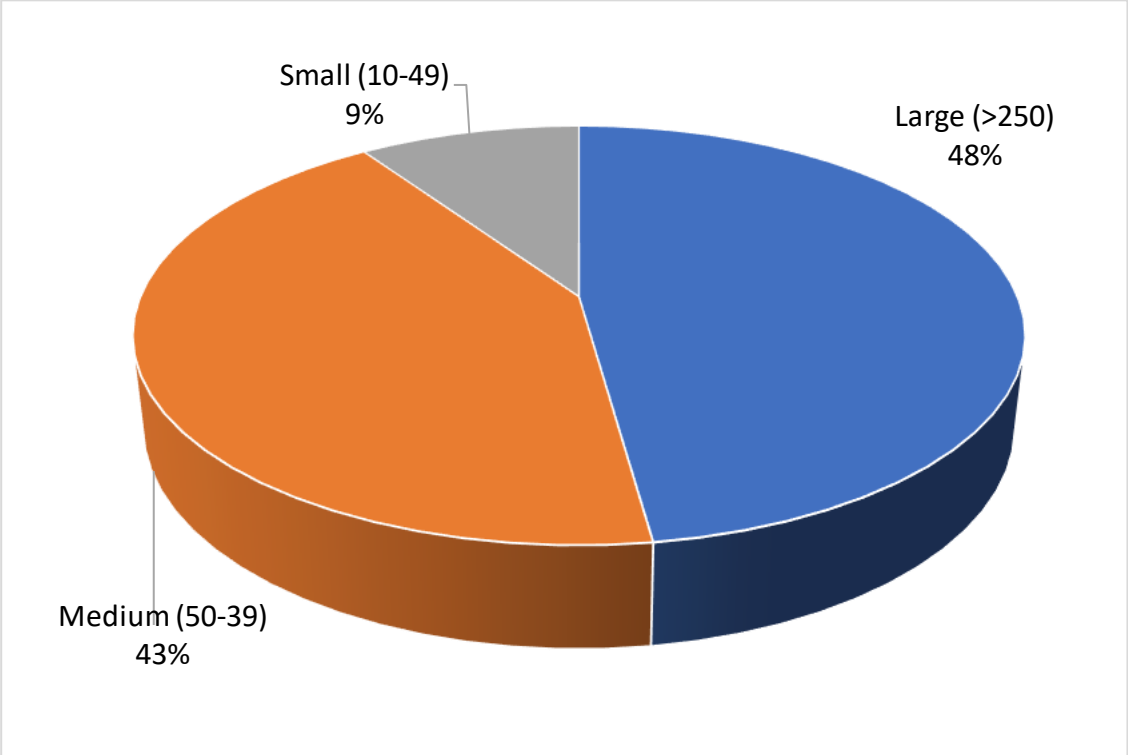


Figure 7-2. Survey respondents by employer size (number of employees).

Most respondents were seasoned professionals, 77% of whom had at ≥10 years' industry experience. The CPS clients included in the sample were identified primarily by their job title. The higher visibility (and therefore accessibility) of more senior individuals could explain why the cohort was dominated by clients with many years of service (Figure 7-3).

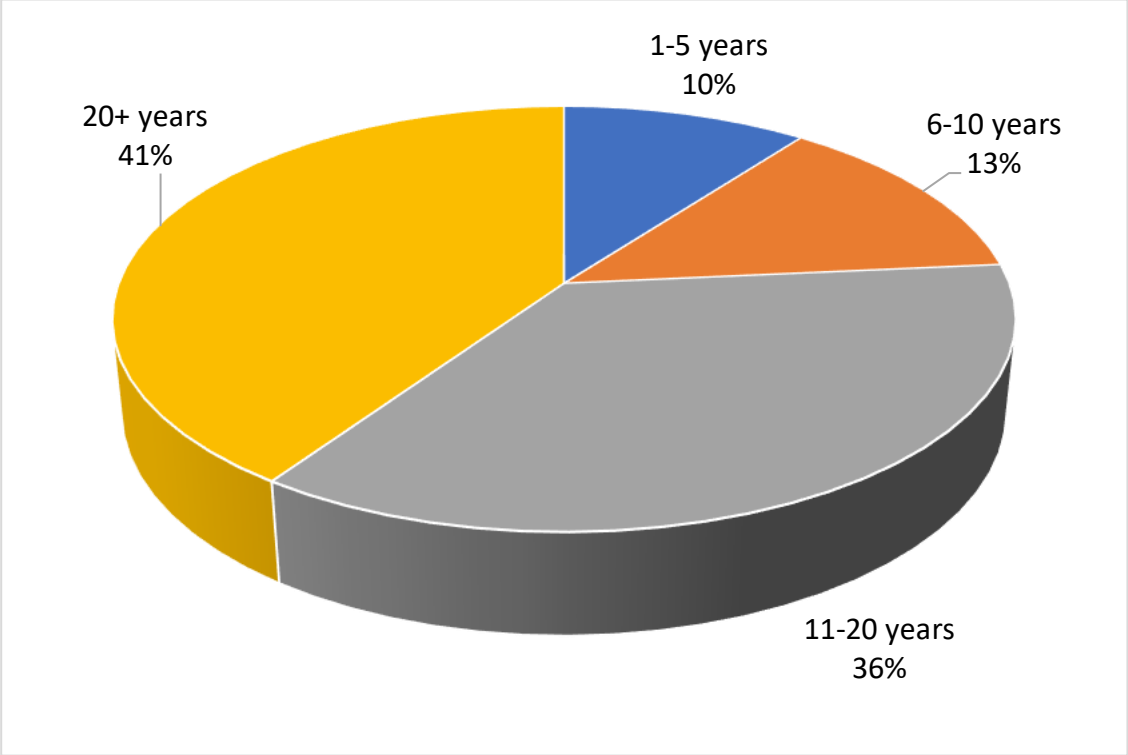


Figure 7-3. Survey respondents by years of experience.

Of the respondents, 88% appear to have a high level of contact with CPS suppliers, stating that they used their services ‘very often’ or ‘always’ (Figure 7-4). This is felt to be important, given that the opinions of respondents remote from CPS suppliers would arguably be less insightful.

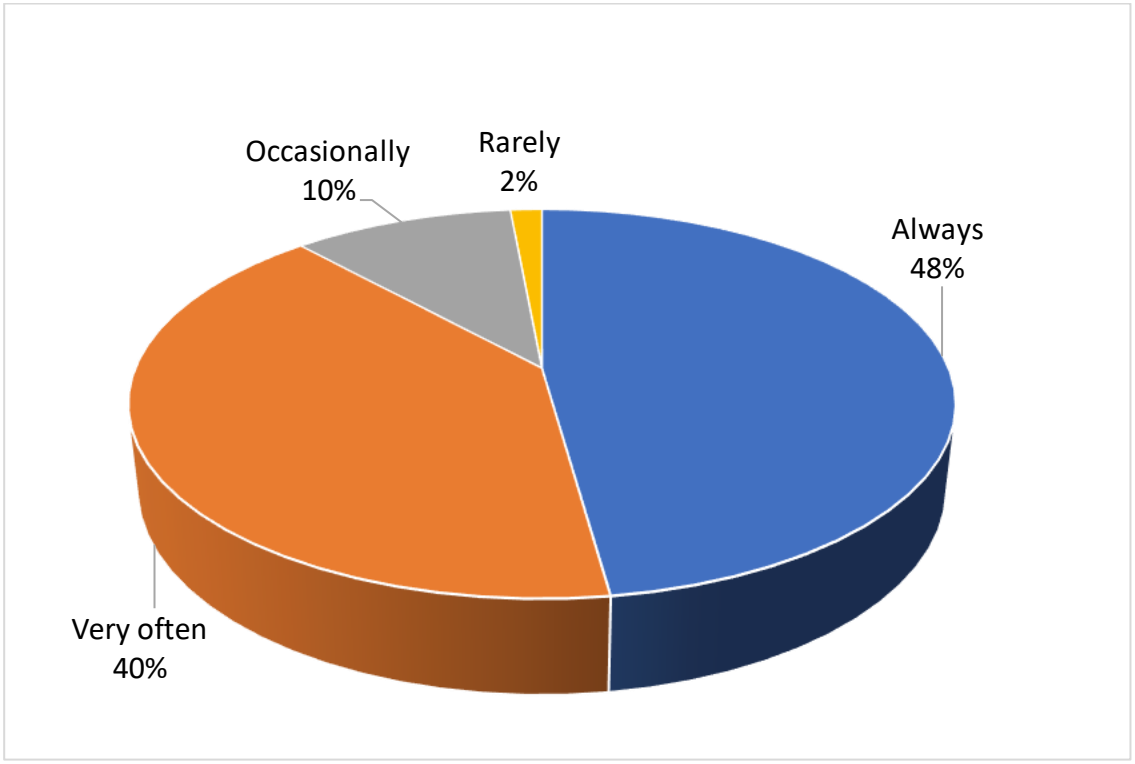


Figure 7-4. Survey respondents' use of CPS suppliers (frequency).

The sub-professions of the CPS suppliers that delivered services to clients are summarised in Figure 7-5. Except for planning consultants, all the sub-professions within the CIC's (2008) definition are represented in the sample. Interestingly, 40% of clients used the supplier for more than one CPS. Many clients' experience is that using the same supplier for related services is convenient and cost-effective (Schmitz, Lee and Lilien, 2014). However, evidence from wider professional service studies shows that some clients lack the appetite for multidisciplinary offerings. The reason posited for this is the poor level of service experienced by many clients when receiving more than one professional service delivered by the same supplier (Karantinou and Hogg, 2007).

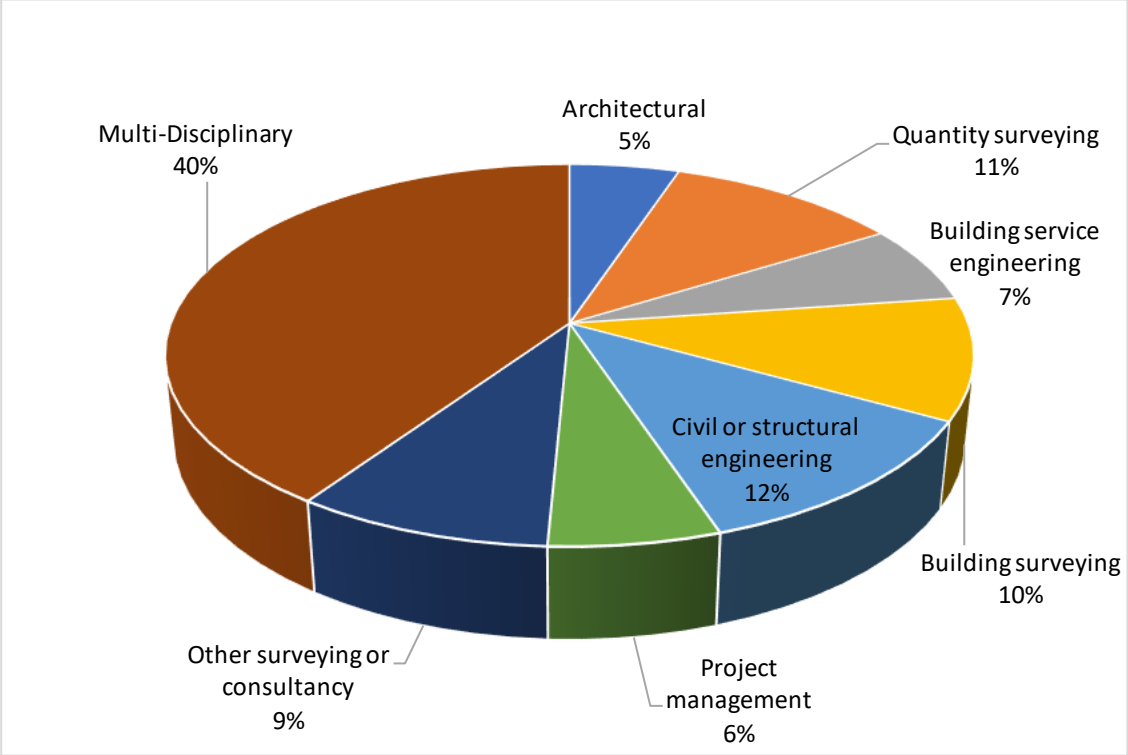


Figure 7-5. Sub-profession services delivered by the target CPS supplier.

The instructions in the survey requested that the respondents should provide answers corresponding to the CPS supplier used on their most recent project or service commissioned. , Just over half of the supply relationships in the sample are between one and five years' duration (Figure 7-6). CPS clients demonstrated a relatively high degree of loyalty, with 18% of the relationships being longer than five years and 17% being ≥10 years. Only 14% of service relationships were new (less than one year's duration). This suggests clients tend to retain their construction professionals, notwithstanding poor performance or institutional requirements for retendering CPS work packages that may necessitate switching.

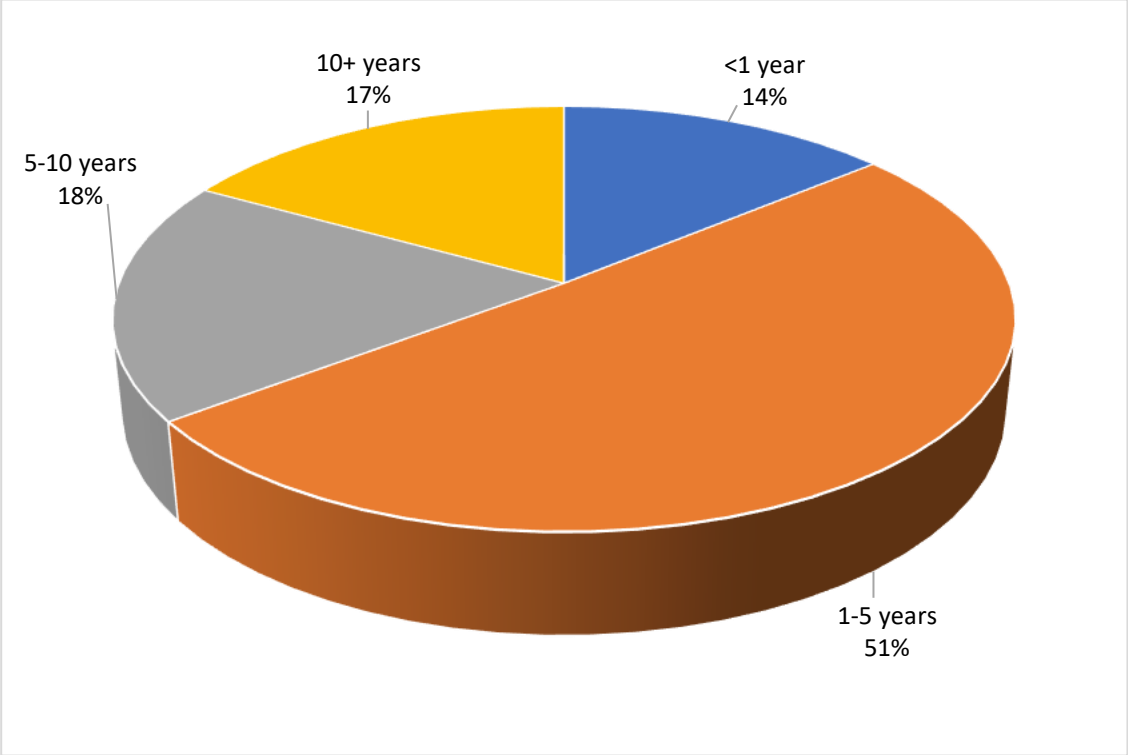


Figure 7-6. Survey respondents' duration of using the target CPS supplier.

7.3. Data screening

The returned survey data were manually input into an SPSS v.24 data file and then screened to assess its suitability for analysis. This is important due to certain multivariate analysis assumptions. Missing data, the violation of assumptions, and outliers can compound to create substantial error. Failure to screen data effectively can lead to biased or invalid results (Hair *et al.*, 2014; Field, 2018).

The data set was first screened for missing values. This has been described as being 'a fact of life' for researchers undertaking multivariate analysis (Hair *et al.*, *2*014, p. 40). The 'missing values' tool in SPSS v.24 was used to quantify the amount of missing data. A total of 4% of the data was missing from the respondents' questionnaires. This amount of missing data can generally be ignored, assuming that it is missing in a random fashion (Hair *et al.*, *2*014). The returned data was examined using Little's 'Missing Completely At Random' (MCAR) test in SPSS v.24 to identify systematic non-response bias, which could

negatively impact on the results. The MCAR test was applied to all scale data and returned a chi-square value of 294.1 ($p > 0.05$). The non-significant result demonstrates that there is no discernible evidence of a missing-data pattern, which could have represented a source of bias.

Missing values from the questionnaire section were remediated ahead of the factor analysis using the median substitution tool in SPSS v24. This is more appropriate than mean substitution for Likert scale data (Lynch, 2007). Despite being a common approach to dealing with missing data, Hair *et al.* (2014) warned against the non-judicious use of mean and median substitution, since it can understate the variance estimates and depress correlations. However, they also stated that it should lead to minimal adverse impact where the amount of missing data is low, as was the case for this dataset. Furthermore, a list-wise case deletion would have reduced the sample size available for the analysis, as well as preventing the running of subsequent model-modification-indices tests.

Individual Likert item data should not be analysed separately (Carifio and Perla, 2008). However, prior to the factor analysis and subsequent hypothesis testing, the data were examined for outliers and to assess its general distribution. Whilst outliers are less of a problem with Likert data, given that it is a bounded scale, they can occur due to input error (Lowry and Gaskin, 2014). An investigation of outliers using boxplot checks in SPSS v.24 was conducted all items. This revealed one obvious input error in case 45, which was then corrected.

There is a generally accepted view that data for individual Likert items is ordinal and therefore cannot be classed as normal (Pallant, 2016; Field, 2018). With respect to factor analysis, departures from normality, homoscedasticity and linearity only cause problems to the extent that they diminish observed correlations (Hair *et al.*, 2014). However, for robustness purposes, the data were examined for kurtosis and skewness prior to factor analysis, as recommended by Gaskin (2018).

There are no definitive values to determine the acceptability of skewness and kurtosis (Pallant, 2016). However, values between -1 and +1 are considered to indicate normality. Absolute values of skewness and kurtosis inside ±2 are acceptable with respect to parametric assumptions (Trochim and Donnelly, 2006). The data for three items had kurtosis values >±2, indicating positive skewness; specifically, these are trust (4.a) and two technical-quality items (6.a and 6.b). In line with Gaskin's (2018) guidance, they were left in the dataset, and these findings noted for assistance in interpreting the results of factor analysis.

The data were screened to identify unengaged responses that could affect results, such as reducing the magnitude of correlations. This involved checking the data to identify instances of respondents giving the same score to the question sets. It was achieved using a simple standard deviation calculation in MS Excel for all data rows. Additionally, the data were examined to determine the degree to which the respondents had identified the attention-traps in the repatronage and PWOM item batteries. Of the respondents, 12 (9%) and 10 (7%) failed to identify the attention-traps in the repatronage and PWOM items, respectively. This was noted to assist interpreting the results of the factor analysis and reliability analysis. No results with a zero standard deviation were identified. This suggests that respondents failed to identify the attention traps in error, as opposed to from a lack of engagement. Therefore, no cases were omitted on this basis.

7.4. Factor analysis

Given that both the predictor (independent) and outcome (independent) variables were latent constructs, it was necessary to undertake a factor analysis of the data. The primary purpose of factor analysis is to define the underlying structure of a group of questionnaire items (Hair *et al.*, 2014). Furthermore, it is used to select the items in a scale that indicate a common underlying attitude or phenomenon.

It is strongly recommended to run either an exploratory factor analysis (EFA) or a confirmatory factor analysis (CFA), and to test for reliability before using summated scale data for hypothesis testing (Hair *et al.,* 2014). Factor analysis also achieves parsimony by explaining the maximum amount of common variance in data, by using the smallest number of explanatory constructs (Field, 2018). Factor analysis is unnecessary where researchers use validated scales from other studies (Trasorras, Weinstein and Abratt, 2009). Whilst the scales and items in this research were derived from published studies, some had been slightly modified to reflect the findings of the qualitative analysis. Furthermore, the scales were being used with a new population. It was therefore considered necessary to subject the data to factor analysis. Based on Byrne's (2010) guidance, CFA was the most appropriate in the first instance, given that there was a preconceived notion regarding the factor structure and the items associated with each.

7.5. Confirmatory factor analysis

7.5.1. The use of confirmatory factor analysis

Confirmatory factor analysis (CFA) is often used to test whether constructs are consistent with a researcher's conceptualisation. The hypothesised model can then be tested to determine data consistency. CFA is appropriate for the measurement of both observable and latent variables (those that cannot be measured directly). The individual items are the observed indicators of the underlying construct that they are presumed to represent. In CFA terminology, independent variables are termed 'exogenous' and outcome variables termed 'endogenous.' The underlying factors are specified *a priori* and analysed statistically. For example, it would be expected that items measuring trust would load onto that factor in a stronger manner than others such as commitment, as

demonstrated in many extant studies (e.g. Morgan and Hunt, 1994; Cater and Cater, 2010).

In CFA, the items hypothesised to be associated with a particular factor are allowed to load onto that factor whilst being restricted to zero loadings onto other factors (Brown, 2006). The resulting model is then evaluated to determine its 'goodness of fit' to the sample data. The measurement model depicts the links between the observed indicators and the latent variables. Whilst there are several approaches to CFA, a model-generating approach was taken in line with the research design. This is the most commonly adopted method of CFA (Byrne, 2010).

7.5.2. Results of the confirmatory factor analysis testing

Analysis to determine whether the factor structure of the measured data matched that hypothesised was undertaken using AMOS v.24, which is an extension module for SPSS v.24. The first stage of testing in AMOS was to determine the measurement model of the co-varied independent variables. The model was built using the graphical interface of the application. All seven predictor variables and their associated items were entered into the model; specifically, affective commitment, locked-in commitment, value-based commitment, trust, function quality, technical quality and communication quality (Figure 7-7).

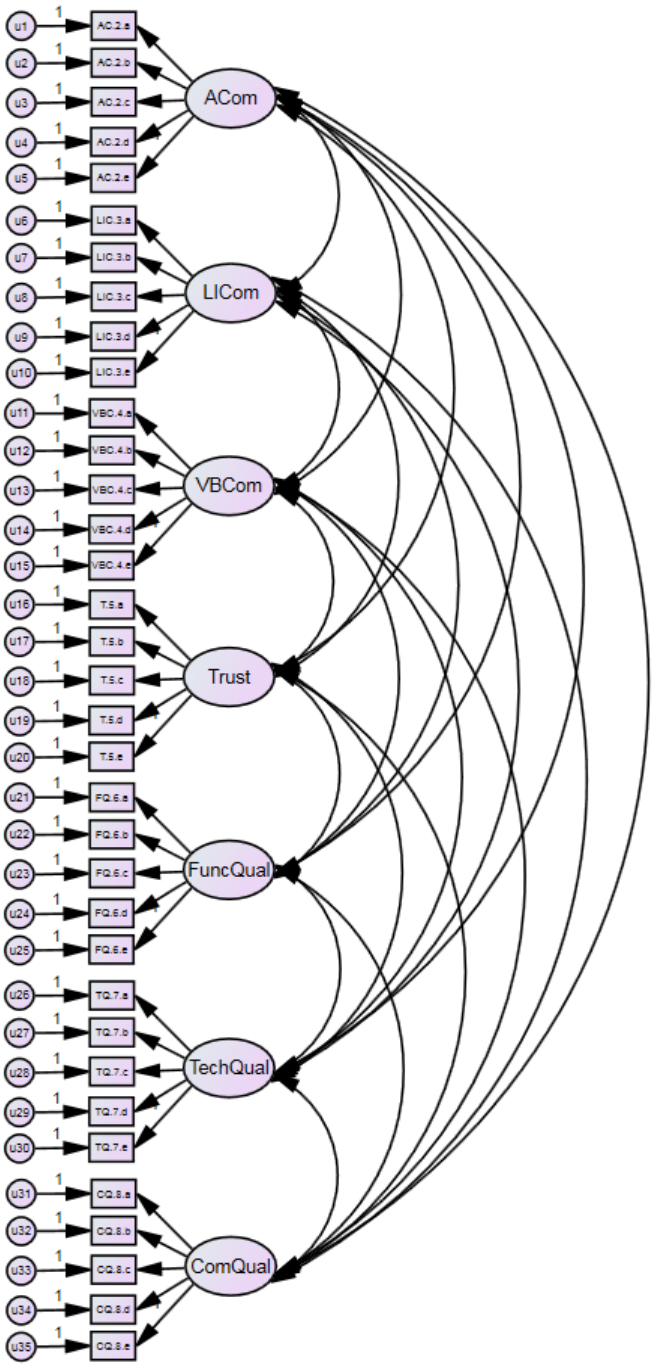


Figure 7-7. Measurement model of predictor variables (source: AMOS v.24).

The results show a poor model fit (chi-square = 811.93, p <0.001). This is also demonstrated via the fit indices (Table 7-2). Both the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) are outside acceptable values, demonstrating that the items do not align with the predetermined factor structure.

Table 7-2. Goodness-of-fit results of the confirmatory factor analysis

Goodness-of-fit measure	Recommended cut-off value (Chau, 1997)	Observed values
GFI	≥0.9	0.75
AGFI	>0.8	0.71
RMSEA[i]	<0.1	0.61
CFI[ii]	>0.9	0.94
NFI[iii]	>0.9	0.85
TLI[iv]	>0.9	0.94

Where i = root mean square error of approximation; ii = comparative fit index; iii = normed fit index; and iv =Tucker–Lewis Index.

Several options are available for dealing with this scenario. These include using the diagnostic information provided by AMOS to determine the cause of the problems. Adjustments can then be made, such as removing items or adding co-variances as a means of achieving a better-fitting model. Whilst such actions are arguably exploratory, as opposed to confirmatory, it is uncommon for a good model fit to be achieved without some minor modification (Byrne, 2010). In practise, CFA is rarely conducted without some exploration, whilst EFA is rarely used in a purely exploratory manner (Bandalos, 2018). However, given the results and accounting for the fact that the survey data had been gathered from a new population, it was concluded that the factor structure clearly required deeper exploration and that the use of CFA was prematurely imposing a rigid structure on the data. Therefore, in line with the example provided by Bofah and Hannula (2015), EFA was instead used to examine the factor structure.

7.6. Exploratory factor analysis

7.6.1. The use of exploratory factor analysis

There are several related techniques available for exploring factor structures. Whilst they differ with respect to their mathematical bases, they often yield similar results. Principal components analysis (PCA) in SPSS v.24 was selected as it is an efficient and psychometrically sound procedure (Brown, 2006; Field, 2018). Strictly speaking, PCA leads to the extraction of what are referred to as 'components' rather than 'factors.'. However, these terms are often used interchangeably (Pallant, 2016). Whilst it is frequently utilised as a means of data reduction, PCA is the most utilised means of extracting factors in construction management research (Fellows and Liu, 2015).

SPSS allows several methods of rotation when undertaking PCA. This does not change the underlying solution, but it presents the factor loadings in a pattern that is easier to interpret. Orthogonal rotation often results in solutions that are the easiest to evaluate. However, they require the assumption that the factors are independent and uncorrelated. Oblique rotation allows for factors to be correlated, but it often produces results that are more difficult to interpret. Oblique (promax) rotation was selected, given that Field (2018) maintained that it is unlikely that many psychological constructs can be completely unrelated.

Separate analyses were conducted for the indicator items and outcome items. This made conceptual sense and was necessary to allow the refined predictor variables to predict the outcome variables. A basic assumption of factor analysis is that an underlying structure exists within the set of variables. EFA can analyse either dependent or independent variables considered separately (Hair *et al.*, 2015). It was also important to evaluate the degree to which the themes and sub-themes reported by the qualitative analysis were expressed in the factor structure.

In this manner, the data were examined to determine if the items clustered together in a conceptually meaningful way, thereby demonstrating factorial validity (Field, 2005, 2018).

7.6.2. The results for predictor items

The Kaiser–Meyer–Olkin (KMO) measure verifies the sampling adequacy for factor analysis. Table 7-3KMO is 0.946, which (according to Field (2018) guidance) is high enough to demonstrate suitability for factor analysis (Table 7-3). KMO values for all individual items are above the acceptable value of 0.5. Bartlett's test of sphericity is 4762.6 ($p < 0.001$), indicating that correlations between items were sufficiently large for PCA. No items were found on the correlation matrix with a KMO value >0.9, which would indicate item redundancy. Communality values for all items are >0.5 after extraction, which is adequate for samples of between 100-200 cases (Field, 2018). Of the non-redundant residuals, 13% have absolute values >0.05, which is acceptable (Field, 2018). An inspection of the anti-image correlation matrix revealed that all measures of sampling adequacy (MSA) values are above the acceptable level of 0.5 (Pallant, 2016; Field, 2018).

Table 7-3. Kaiser–Meyer–Olkin and Bartlett's test results for predictor items

KMO MSA		0.946
Bartlett's test of sphericity	Approx. chi-square	4762.63
	df	595
	p	<0.001

Field (2018) argued that it is the researcher's decision regarding how many factors to extract, based on an informed interpretation. This can involve changing the extraction criterion to achieve a predetermined number of factors. However, it was

decided to apply the Kaiser criterion, allowing the software to retain only those factors with an eigenvalue >1. This was necessary to avoid both bias and the risk of artificially forcing the number of factors extracted to match pre-existing assumptions.

Using the default Kaiser's criterion of retaining factors with an eigenvalue >1, four factors were extracted, representing 71.90% of the cumulative variance (Table 7-4.). This is >60%, which Hair *et al.* (2014) judged to be a sufficiently high level of variance explained for factor solutions relating to social science phenomena.

Table 7-4. Variance explained by PCA for predictor items

	Total	% of Variance	Cumulative %	Rotation Sums of Squared Loadings
1	12.306	49.223	49.223	10.851
2	3.035	12.141	61.364	9.536
3	1.545	6.181	67.545	7.741
4	1.084	4.337	71.882	3.111
5	0.725	2.899	74.780	
6	0.673	2.693	77.473	

Pallant (2016) warned that using the Kaiser criterion can lead to the extraction of a problematically large number of factors. However, only four factors were extracted, which was viewed to be manageable for subsequent multiple regression analysis.

Achieving a clean loading-factor solution involved removing and adding back certain items in an exploratory fashion, whilst examining the impact on the overall factor structure. This aligned with the researcher's adopted worldview and the approach of Haig (2005), who noted that EFA is often used in an abductive manner. It is the responsibility of the researcher to ensure that the resulting item patterns are conceptually valid (Field, 2018). Hair *et al.* (2014, p 125) also emphasised this point, stating that "*even though [the results] may pass all empirical tests [they are] useless without theoretical justification.*" Therefore, whilst

efforts were made to conduct the analysis in an unbiased manner, the outcomes were scrutinised to ensure they made conceptual sense.

Several important findings emerged from the analysis. Whilst some results are consistent with the initial predicted factor structure, others do not match prior expectations. The items originally associated with affective commitment, value-based commitment and locked-in commitment loaded strongly onto separate factors, respectively, without the need for any item manipulation. The items originally associated with the three separate dimensions of quality (functional quality, technical quality and communication quality) all loaded onto the same factor.

The items originally associated with trust proved much more problematic, loading onto more than factor. Hair *et al.* (2014) stated that items that persistently display a pattern of cross-loading, despite the researcher's attempts to resolve them, become candidates for deletion. Ultimately, a clean factor solution could only be reached by removing the trust items from data. After this, it was only necessary to remove two items (5.FQ.c. and 7.CQ.e) in order to achieve a structure in which all predictor items loaded cleanly onto single factors. All items' factor loadings are ≥0.5, the threshold above which Hair *et al.* (2014) stated is demonstrative of practical significance.

The interpretation and naming of factors is a subjective and inductive process (Williams, Onsman and Brown, 2010). However, as a result of the clean item-loading pattern achieved, the naming of factors was relatively straightforward. Factor 1 resulted from an amalgamation of the original three quality constructs and was named 'service quality'. The three other factors were named 'affective commitment,' 'locked-in commitment' and 'value-based commitment,' given the clear item-loading pattern in context with the original conceptualisation.

Table 7-5 shows the factor structure for the predictor items, with loadings <0.4 suppressed to assist interpretation. All factor-item loadings are >0.5, the value above which demonstrates practicable significance (Hair *et al.*, 2014). The factor names were added manually *post-hoc* to Table 7-5.

Table 7-5. Final factor structure for the predictor items (PCA extraction)

	1 Service quality	2 Affective commitment	3 Value-based commitment	4 Locked-in commitment
1.ACa		0.859		
1.ACb		0.794		
1.ACc		0.683		
1.ACd		0.775		
1.ACe		0.812		
2.LICa				0.733
2.LICb				0.757
2.LICc				0.815
2.LICd				0.737
2.LICe				0.783
3.VBCa			0.836	
3.VBCb			0.737	
3.VBCc			0.627	
3.VBCd			0.699	
3.VBCe			0.719	
5.FQa	0.668			
5.FQb	0.554			
5.FQd	0.828			
5.FQe	0.730			
6.TQa	0.652			
6.TQb	0.570			
6.TQc	0.599			
6.TQd	0.693			
6.TQe	0.754			
7.CQa	0.745			
7.CQb	0.890			
7.CQc	0.745			
7.CQd	0.886			

Extraction method: PCA.

Rotation method: Promax with Kaiser normalisation. Rotation converged in 10 iterations.

7.6.3. The results for outcome items

The next stage undertaken was a PCA analysis of the outcome items. As shown in Table 7-6, the overall KMO value is 0.941, which is well above the minimum required to demonstrate suitability for analysis. The KMO values for individual items are above the acceptable value of 0.5 for all items (Field, 2018). Bartlett's test of sphericity is 1554.8 ($p < 0.001$), indicating that the correlations between items were sufficiently large for PCA. An examination of the correlation matrix shows one item >0.9, indicating redundancy (PWOM.a). Therefore, this item was removed from the subsequent analysis. Communality values for all items are >0.5, which is adequate for samples of between 100 and 200 cases (Field, 2018). Of the non-redundant residuals, 20% have absolute values >0.05, which is acceptable according to Field (2018). An inspection of the anti-image correlation matrix revealed that all MSA values are above the acceptable level of 0.5 (Pallant, 2016; Field, 2018). The initial solution resulted in two factors being extracted that explain 79% of the cumulative variance. All items' factor loadings are ≥0.5, the threshold of practical significance (Hair *et al.,* 2014).

Table 7-6. KMO and Bartlett's test results for outcome items

KMO MSA		0.941
Bartlett's test of sphericity	Approx. chi-square	1554.800
	df	55
	p	<0.001

Table 7-7. Total variance explained by the two factors extracted

	Total	% of Variance	Cumulative %	Rotation Sums of Squared Loadings
1	7.500	68.180	68.180	7.456
2	1.199	10.896	79.075	2.522
3	0.575	5.229	84.304	
11	0.080	0.728	100.000	

Upon examination of the loading pattern, it became apparent that all outcome items were loading onto one factor, except for 8.RP.f.(R) and 9.PWOM.e.(R), both of which were the attention-trap questions (Table 7-8). As previously reported, 9% and 7% of respondents clearly failed to identify the two attention-traps in the repatronage and PWOM items' sets, respectively. It was suspected that the only reason these items were loading onto a different factor was because of response bias introduced by respondents failing to spot that the item questions were reversed.

Table 7-8. Initial pattern matrix for the outcome items

	1	2
8.RP.a	0.873	
8.RP.b	0.933	
8.RP.c.	0.898	
8.RP.d	0.806	
8.RP.e	0.921	
8.RP.f. (R)		0.867
9.PWOM.b	0.908	
9.PWOM.c	0.917	
9.PWOM.d	0.907	
9.PWOM.e.(R)		0.833

The analysis was rerun with the two reversed items removed to examine the impact this would have on the factor structure. This resulted in a single factor

being extracted (Table 7-9) that explains 80.5% of cumulative variance (Table 7-10).

Table 7-9. Component matrix for loyalty (PCA extraction)

Component Matrix

a. 1 component extracted.

Table 7-10. Total variance explained by loyalty

	Total	% of Variance	Cumulative %
1	7.247	80.525	80.525
2	0.487	5.409	85.934
3	0.355	3.946	89.880
4	0.237	2.630	92.510

Extraction method: PCA.

The result of the repatronage and PWOM items loading onto a single factor is theoretically profound and had implications on how the hypothesis testing would be conducted. Therefore, the same item set was rerun, except using maximum likelihood (ML) instead of PCA as the method of factor analysis. The purpose of this was to verify findings and investigate if it was an artefact of a particular method. The results show that, even when using a different method of extraction, all outcome items loaded onto a single factor when the reversed items were removed (Table 7-11).

Table 7-11. Factor matrix for loyalty (ML extraction)

Factor Matrix

a. 1 factor extracted. 4 iterations required.

7.7. Reliability analysis

When using factor analysis to validate a questionnaire, it is recommended that the scales are also subject to reliability analysis (Field, 2018). Reliability in this context is the degree to which the items in the scale consistently reflect the measured construct. Furthermore, following Hair *et al.* (2014), reliability analysis was used to check whether the associations between the selected construct items were strong enough to make their sum a sufficiently accurate measure of the underlying phenomenon. This was important because the summated scale scores were to be used in subsequent hypothesis testing.

The sets of items for each of the five constructs were subject to reliability analysis using Cronbach's α scale reliability test in SPSS v.24. The results show the α values for all items to be well above the acceptability threshold of 0.7 (Hair *et. al.*, 2014; Fellows and Liu, 2015). A very small improvement could have been made to the value-based commitment scale's reliability by removing item 3.VBC(c). However, this would only have led to negligible improvement. Therefore, no items were removed from any of the five scales for the purposes of improving their reliability.

Table 7-12. Results of scale-reliability testing for the main study

Construct	Cronbach's α	Cronbach's α achieved by dropping item(s)
Affective commitment	0.94	-
Locked-in commitment	0.90	-
Value-based commitment	0.90	0.91
Service quality	0.96	-
Loyalty	0.96	-

7.8. Preparation for hypothesis testing

7.8.1. The use of summated scales

Following the completion of the factor analysis and reliability analysis, the data were prepared for the subsequent hypothesis testing using multivariate statistical analysis. The data obtained from items measuring the same focal variable can be summated, yielding interval data that can be analysed using parametric statistical tests. An underlying assumption when using summated scale data is that its items are unidimensional, loading onto a single factor. This can be assessed using either EFA or CFA techniques (Hair *et al.*, 2014), hence the previous testing undertaken.

There are four main types of data (Field, 2018). Nominal data have no intrinsic numerical value. When data are ordinal, the values can be ranked in order. Interval data share the characteristics of ordinal data, but with equality of the interval between each point on the scale. Finally, ratio data have the features of interval data, with the addition of possessing an absolute zero, making it the most versatile for statistical-analysis purposes. As detailed in Chapter 5, Likert scales were used in the questionnaire to obtain a sample from the wider population. Carifio and Perla (2008, p. 1150) drew attention to "*the 50-year debate*" over how Likert measurement data should be used and analysed. Whilst opinion is not unanimous, the overriding consensus within the academic community is that data captured using Likert scales are ordinal and not interval, at least in its raw form (Pallant, 2016; Field, 2018).

Parametric statistical methods are the most sensitive and powerful, but they are suitable only for interval or ratio data. Whilst non-parametric statistical-analysis methods are available, there is a greater chance of a Type II error resulting from their use. This is a particular risk where relationships between the variables are

weaker. Whilst individual item data are ordinal, Likert *scale* data (using a collection of multiple items measuring a construct in a summated or averaged form) can be treated as interval data for the purposes of statistical analysis (Nardi, 2006). Carifio and Perla (2008, p. 1151) argued that "*it is perfectly appropriate to sum Likert items and analyse the summated scores parametrically, both univariately and multivariately.*" Hair *et al.* (2014, p. 3) defined 'summated scales' as "*combining several variables that measure the same concept into a single variable*" and stated that "*in most instances, the separate variables are summed and then their total or average score is used in the analysis*".

The item data were subsequently converted into summated scale scores using the 'compute variable' function in SPSS v.24. An advantage of using summated scales is that it mitigates the impact of measurement error, compared to the use of single-item variables (Hair *et al.*, 2014). The use of PCA to refine scales, calculating summated scores and then analysing them via multiple regression to test hypotheses, has been adopted in published built environment research (e.g. Eriksson, Nilsson and Atkin, 2008).

7.8.2. Preliminary examination using correlation analysis

Prior to the hypothesis testing, the associations of the predictor variables with the outcome variable were assessed using a simple bivariate correlation analysis in SPSS v24. This was needed to determine the necessity of excluding any of the predictor variables prior to running the multiple regression analysis. A summary of the correlations between the predictor and outcome variables is presented in Table 7-13.

Table 7-13. Correlation analysis of predictor variables to outcome variable

Predictor variable	Pearson's r versus outcome variable (loyalty)
Affective commitment	0.86**
Locked-in commitment	0.26
Value-based commitment	0.66**
Service quality	0.90**

**Correlation is significant at p <0.01 (two-tailed).

Ideally, the predictor and outcome variables should be significantly correlated to justify entering them into the multiple regression equation. Each of affective commitment, value-based commitment and service quality was significantly correlated with loyalty. However, locked-in commitment was weakly and non-significantly correlated with loyalty. It can be expedient to exclude predictor variables that are weakly correlated with the predictor variable from multiple regression analysis. Doing so may improve model parsimony and avoid the risk of non-influential predictor variables masking the effect of others that are more useful. However, Hair *et al.* (2014) noted that, on balance, it is better to include a potentially irrelevant variable rather than exclude it, in case it has some explanatory value that is not apparent via simple correlation analysis. On this basis, all four predictor variables were retained and entered into the multiple regression analysis.

The strength of the association between predictors should not be so high that there is a risk of bias and error (i.e. 'multicollinearity'), which is the extent to which a predictor variable can be explained by another predictor variable in the analysis. As multicollinearity increases, it is more difficult to ascertain the effect of any single predictor variable, owing to the interrelationships with other predictor variables. , None of the predictor variables are inter-correlated >0.9, the level at which problems due to multicollinearity are most likely to occur (Field, 2018) (Appendix

G). Therefore, no predictor variables were excluded at this stage, notwithstanding a subsequent deeper assessment of multicollinearity during regression diagnostics.

7.9. Hypothesis review

The previous stages of analysis involved refining and empirically demonstrating a set of unidimensional and reliable constructs to represent the predictor and outcome variables. This section presents the hypotheses associated with the subsequent analysis of predictor variables (affective commitment, locked-in commitment, value-based commitment and service quality) and the outcome variable (loyalty). Factor analysis led to the development of a single 'service quality' predictor variable. Furthermore, a single outcome variable comprised of repatronage and PWOM items was developed, referred to as 'loyalty.' After obtaining the group of empirically validated and reliability tested constructs, it was possible to state the hypotheses, which are presented as follows.

Evidence from the accounts of most respondents during the qualitative research phase suggests that affective commitment leads to both PWOM and repatronage. In wider business settings, affective commitment towards the supplier has been associated with PWOM (Morgan and Hunt, 1994; Anaza and Rutherford, 2014), repatronage (Gounaris, 2005; Rauyruen and Miller, 2007) and constructs combining the two (Cater and Zabkar, 2009; Cater and Cater, 2010). Therefore, the following hypothesis is stated:

H1. There is a significant positive relationship between affective commitment and client loyalty.

Evidence from the accounts of most respondents during the qualitative research phase suggests that locked-in commitment leads to repatronage. This supports

the findings of research from property-related services (Levy and Lee, 2009) and other professional services (Cater and Cater, 2010). Bendapudi and Berry (1997, p. 19) identified "*constraint-based*" factors as being important in relationship continuity between clients and service providers. Constraint-based factors (switching costs) have been positively associated with the repatronage aspect of client loyalty in wider business-to-business services (Lam *et al.*, 2004). Therefore, the following hypothesis is proposed:

H2. There is a significant positive relationship between locked-in commitment and client loyalty.

Value-based commitment towards the CPS supplier is associated with PWOM and repatronage according to many respondents from the qualitative research phase. The evidence for the positive impact of value on PWOM in the literature is mixed. No significant relationships are shown in some studies (e.g. Rauyruen and Miller, 2007; Molinari, Abratt and Dion, 2008; Cater and Cater, 2010). In contrast, other studies find value to be significantly associated with PWOM (Trasorras, Weinstein and Abratt, 2009; Ramaseshan, Rabbanee and Tan Hsin Hui, 2013). Perceived value is positively associated with repatronage loyalty in research on both professional services (Palihawadana and Barnes, 2004) and wider business-to-business services (Molinari, Abratt and Dion, 2008; Trasorras, Weinstein and Abratt, 2009; Russo *et al.*, 2016). Therefore, the following hypothesis is proposed:

H3. There is a significant positive relationship between value-based commitment and client loyalty.

Most of respondents' accounts during the qualitative phase of research provide evidence that client-loyalty outcomes are positively influenced by both *what* is delivered (technical quality), *how* the service is delivered (functional quality) and

communication quality. Evidence from other professional and wider business-to-business literature suggests that service quality is positively associated with loyalty (Rauyruen and Miller, 2007; Molinari, Abratt and Dion, 2008; Chenet, Dagger and O'Sullivan, 2010). CPS quality is a key selection criterion for clients (Jewell, Flanagan and Lu, 2014). Therefore, the following hypothesis is stated:

H4. There is a significant positive relationship between service quality and client loyalty.

Figure 7-8 summarises the four hypotheses regarding the association of service-related antecedents with client loyalty. Section 6.10 presents the results of hypothesis testing via multiple regression analysis.

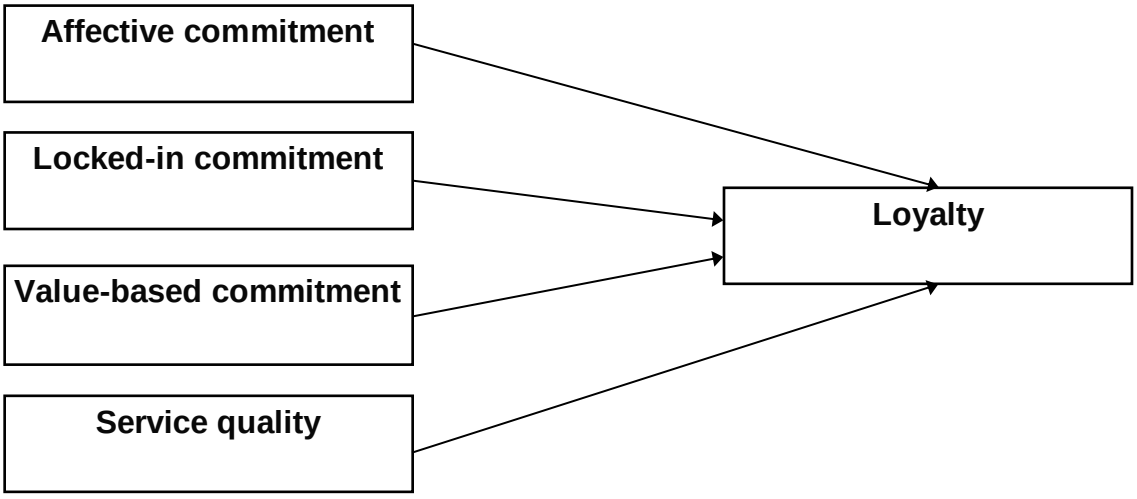


Figure 7-8. Model of hypotheses to be tested.

7.10. Hypothesis testing

7.10.1. The use of multiple regression analysis

Multiple regression analysis was selected as the means of testing the hypotheses, as it is a highly effective multivariate technique for determining which variables can predict a particular outcome (Pallant, 2016; Hair *et al.*, 2014). Regression analysis

is often used in causal models in construction management research (Fellows and Liu, 2015). There are several different multiple regression methods and the main categories are:

- Standard (simultaneous): All independent (predictor) variables are entered into the equation simultaneously. This provides results regarding the amount of collective variance the predictor variables explain. It can also determine the variance explained by each individual predictor variable.
- Hierarchical (sequential) multiple regression: The predictor variables are entered into the equation sequentially in accordance with the researcher's theories regarding their relative predictive power. This allows researchers to control for the effects of other variables.
- Stepwise multiple regression: Independent variables are entered into the equation by the software, the order of which is determined by statistical criteria.

Hypothesis testing was undertaken using standard (simultaneous) multiple regression analysis in SPSS v.24. Unless variables are being controlled for, this is the preferred option Field (2018). The predictor variables entered into the multiple regression equation were the summated scale scores for affective commitment, locked-in commitment, value-based commitment and service quality. The outcome variable was the summated scale score for loyalty.

7.10.2. Results of the multiple regression analysis

Table 7-14 shows the multiple-regression-model summary. The amount of variance (R^2) explained by the model is 87% ($R^2 = 0.867$). This is sufficiently large, considering that the model was measuring social phenomena utilising the guidance of Pallant (2016) and Field (2018). The results reveal that the adjusted

R^2 (0.863) is very close to the actual R^2 (0.867), which demonstrates a high degree of model generalisability and cross-validity (Field 2018).

Table 7-15 shows a large and significant F-statistic, demonstrating that the model is a significant predictor of loyalty (F = 212.6, p <0.001).

Table 7-14. Multiple-regression-model summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Durbin-Watson
1	0.931	0.867	0.863	3.162	2.221

Predictors: Service quality, value-based commitment, locked-in commitment and affective commitment.

Dependent variable: Loyalty.

Table 7-15. Analysis of Variance (ANOVA) for multiple regression model

Model	Sum of Squares	df	Mean Square	F	P.
Regression	8541.870	4	2135.468	213.602	<0.001
Residual	1309.659	131	9.997		
Total	9851.529	135			

Predictors: Service quality, value-based commitment, locked-in commitment and affective commitment.

Dependent variable: Loyalty.

Table 7-16 presents the regression coefficients, associated t-statistics, confidence intervals, tolerance and variance inflation factor (VIF) values for the regression model. The outputs were examined to ensure the absence of any problematic multicollinearity. Whilst it is rare for social phenomena to be completely uncorrelated (Field, 2018), unreliable results can arise from multiple regression analyses where predictor variables are very highly correlated. The VIF values are all <4, above which the risk of problems associated with multicollinearity is high (Hair *et al.*, 2014). Furthermore, VIF values were well below 10, above which bias is most likely and at which coefficients are likely to be poorly estimated (Pallant, 2016; Field, 2018). The tolerance values (which are the reciprocals of the VIFs)

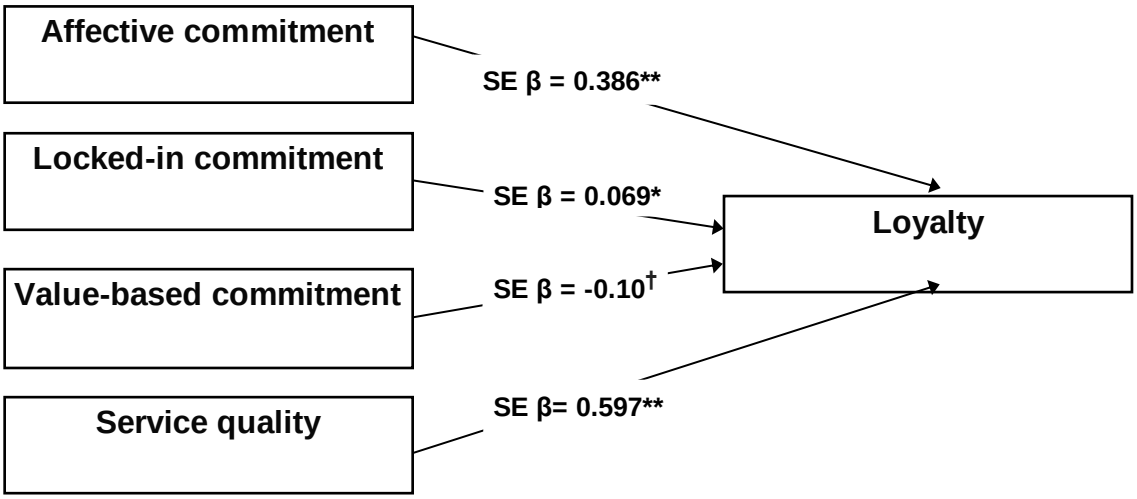
are all >0.1, the minimum threshold stated by Field (2018) and just above the more stringent value of 0.25 (Hair *et al.*, 2014). Therefore, whilst there is evidence of some multicollinearity, it is just below the problematic level.

Table 7-16. Regression coefficients

Model	Unstandardised Coefficients B	Unstandardised Coefficients Std. Error	Standardised Coefficients Beta	t	p	95.0% Confidence Interval for B Lower Bound	95.0% Confidence Interval for B Upper Bound	Tolerance	VIF
(Constant)	-2.859	1.847		-1.548	0.124	-6.512	0.794		
Affective commitment	0.633	0.091	0.386	6.921	<0.001	0.452	0.814	0.326	3.067
Locked-in commitment	0.111	0.051	0.069	2.149	0.033	0.009	0.212	0.971	1.030
Value-based commitment	-0.018	0.085	-0.010	-.218	0.828	-0.186	0.149	0.461	2.167
Service quality	0.407	0.042	0.597	9.586	<0.001	0.323	0.491	0.261	3.826

The multiple regression analysis demonstrates that three out of the four independent variables (affective commitment, locked-in commitment and service quality) are significant predictors of CPS-client loyalty (Figure 7-9). An inspection of the standardised β coefficients shows that service quality is the strongest overall predictor (SE β = 0.597, p <0.001), followed by affective commitment (SE β = 0.386, p <0.001). Locked-in commitment is a far weaker predictor and only barely significant (SE β = 0.069, p <0.05). The confidence intervals for this predictor are relatively large. However, the intervals do not cross zero, and so, whilst the

parameter is less representative, locked-in commitment is a significant (albeit a weak) predictor of loyalty.



** = significant at p <0.001. * = significant at the 0.05 level

† = non-significant.

Figure 7-9. Model showing the results of the hypothesis testing.

Although value-based commitment is significantly correlated with loyalty via a simple bivariate correlation (r = 0.66**), it is not a significant predictor of loyalty when entered into the multiple regression equation with the other predictors. It explains no unique variance in loyalty, as demonstrated by rerunning the same multiple regression analysis but with value-based commitment excluded, resulting in an identical explained variance (R^2 = 0.867). This contrasts with locked-in commitment, which explains a very small but significant amount of variance when comparing R^2 before and after its inclusion.

The multiple regression diagnostics suggest there is not a problematic degree of multicollinearity associated with value-based commitment, which was the first explanation considered for its apparent lack of influence on the regression model. Hair *et al.* (2014) proposed a comparison of the bivariate correlations between the

predictors and the outcome variable when interpreting unexpected outcomes of multiple regression. Irrespective of multicollinearity diagnostics, even low levels of multicollinearity can impact on results if a predictor is more highly correlated with another predictor than it is with the outcome variable. Service quality is strongly and significantly correlated with loyalty (r = 0.9**). It also has a strong and significant influence on the outcome variable when entered into the multiple regression equation (SE β = 0.597, p <0.001). However, value-based commitment is more highly correlated with service quality (r = 0.73**) than it is with loyalty (r = 0.66**). This implies that shared variance is dampening the influence of value-based commitment on the multiple regression analysis model. Therefore, despite value-based commitment having a significant bivariate correlation with loyalty, it is not a significant predictor of loyalty when entered into the multiple regression equation with other predictors.

To examine this effect more closely, the analysis was rerun using stepwise multiple regression in SPSS v24. Instead of forcing the predictors into the equation, the software entered them sequentially, based on mathematical criteria. Backwards stepwise regression was selected, following the guidance of Field (2018). Selecting this method reduced risk of Type II error through the inadvertent exclusion of value-based commitment if it was, in fact, a significant predictor of loyalty. The backwards stepwise regression results match the results obtained by the standard multiple regression. Affective commitment, locked-in commitment and service quality were all retained in the model, and with the same levels of strength and significance. The software had excluded value-based commitment, further demonstrating that it does not explain any unique variance in loyalty, most likely due to the relatively high degree of variance shared with service quality. Therefore, value-based commitment is not a significant predictor of loyalty, either by simultaneous or stepwise regression.

The exploratory regression analysis also led to the identification of a suppression effect with respect to locked-in commitment and service quality. This is a situation where a relationship between a predictor and outcome variable is hidden or suppressed when viewed in a bivariate relationship (Hair *et al.*, 2014; Field, 2018). The inclusion of service quality into the multiple regression equation led to the identification of a weak-but-significant relationship between locked-in commitment and loyalty. This was explored by removing predictors from the equation and examining the impact on the outcome β weights and significance levels. This followed the approach adopted in the professional-service-loyalty study of Cater and Cater (2010), who encountered suppression effects between predictors. In their study, the only predictor that shows a consistently strong and significant effect on loyalty is affective commitment. Whereas, in this research, both affective commitment and service quality are both consistently strong and significant predictors of loyalty, whatever combination of antecedents was included in the multiple regression equation.

Whilst the simultaneous method of multiple regression can be classed as confirmatory, the exploratory work of manually removing and re-entering variables, as well as stepwise regression are classed as sequential methods. In this research, confirmatory and sequential methods were used together. Hair *et al.* (2014) described this as combinatory multiple regression, arguing that it is a more robust and balanced approach than using only one method alone.

To summarise, (in order of influence) service quality, affective commitment and locked-in commitment are significant predictors of CPS-client loyalty (Figure 7-9). Only value-based commitment is non-significant at $p < 0.05$.

7.10.3. Multiple regression diagnostics for the hypothesis testing model

Multiple regression is a powerful statistical means of identifying which variables best predict others. However, its use involves several assumptions about the data, which if violated, risk bias and untrustworthy results. Furthermore, if these assumptions are not met, it will limit the degree to which the results could be generalised to the wider population. Multiple regression models assume that errors (residuals) are independent, uncorrelated and normally distributed. If this is not the case, then the standard errors, confidence internals and significance tests are invalidated. Multiple regression also assumes that the residuals at each level of the predictor variable have similar variance (i.e. 'homoscedasticity'). Furthermore, there is an assumption that there are no problems with 'autocorrelation', a term denoting a situation where residuals are correlated.

The autocorrelation of residuals can be diagnosed using the Durbin-Watson test. Table 7-14 demonstrates a Durbin-Watson result of 2.221 for the regression model, which is within the acceptable range of 1–3 (Field, 2018). This indicates no evidence of bias resulting from autocorrelation. The residual statistics tables were checked for the presence of overly influential cases as shown in Table 7-17. This identified that the highest Cook's distance value is 0.118. None of the cases have values >1, the level above which cases are considered influential and should be examined (Pallant, 2016; Field, 2018). Similarly, all Mahalanobis distance values are <15, which is a conservative level of acceptability for a dataset with <100 cases and four predictors. Therefore, there are no individual cases in the dataset that have an overt influence on the model, risking bias and the distortion of the results.

Table 7-17. Residual statistics: influential-case analysis

	Minimum	Maximum	Mean	Std. Deviation	N
Mahal. Distance	0.213	13.707	3.971	3.188	136
Cook's Distance	0.000	0.118	0.009	0.015	136

Dependent variable: Loyalty.

An examination of the residuals' case-wise diagnostics (Table 7-18) gives all individual standardised residuals that exceed an absolute value of ±2.0. No values exceed ±3.0, which would indicate outliers. Field (2018) stated that, to avoid the risk of bias, <5% of residuals should be above or below an absolute value of ±2.0, and no more than 1% above or below an absolute value of ±2.5. There are no cases with residuals >±2.5, and only 3.7% of values exceed an absolute value of ±2.0. Furthermore, the highest standardised DFBeta value calculated for the data set is 0.69. This is <1, which indicates the overt influence of a case on a model.

Table 7-18. Residual statistics: case-wise diagnostics

Case Number	Std. Residual	Loyalty	Predicted Value	Residual
55	2.211	23.00	16.008	6.992
111	2.001	56.00	49.673	6.327
112	2.124	56.00	49.283	6.717
125	-2.418	40.00	47.645	-7.644
126	-2.152	38.00	44.805	-6.805

Dependent variable: Loyalty.

The outputs were examined to evaluate the distribution of standardised residuals associated with the multiple regression analysis. Visually, residuals conform to a normal distribution (Figure 7-10). This is supported by the probability–probability (P-P) plot. Figure 7-11, which reveals only minor snaking either side of the diagonal line of normality (Figure 6-11).

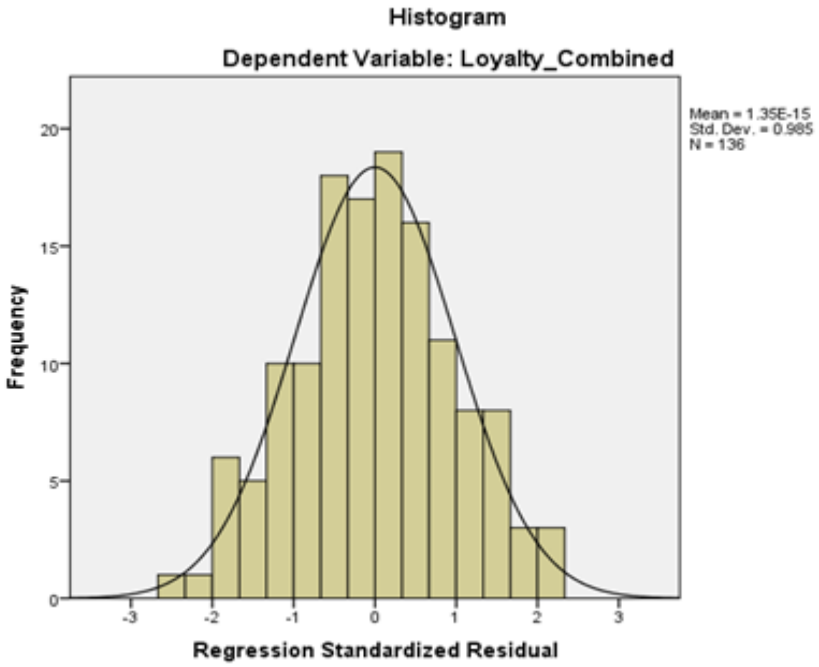


Figure 7-10. Histogram plot of residuals.

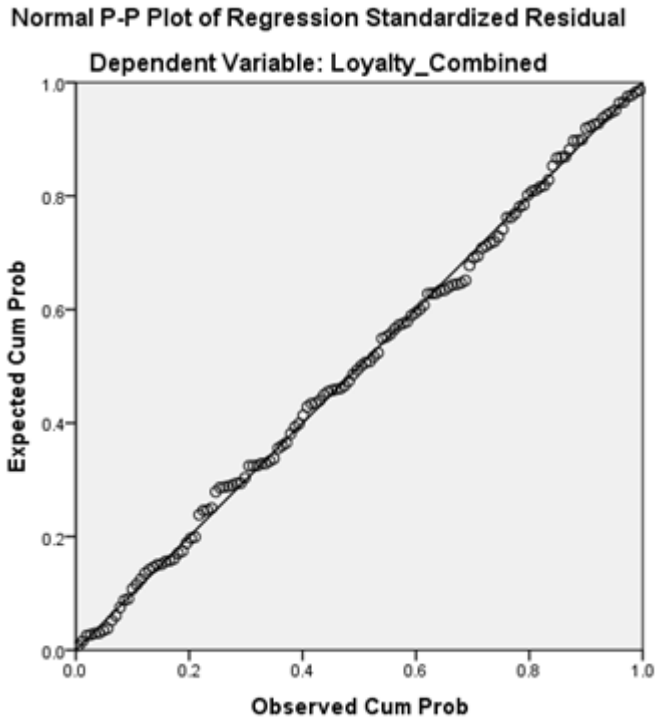


Figure 7-11. P-P plot of residuals.

The residuals scatterplot was inspected for the violation of assumptions with respect to the linearity and homoscedasticity of the variance (Figure 7-12). The values are clustered more densely around zero, with no shape indicative of problems. However, the distribution either side of zero is not perfectly symmetrical.

Therefore, for avoidance of doubt, to validate the confidence intervals and significance tests of the model, the parameters were re-estimated using robust regression.

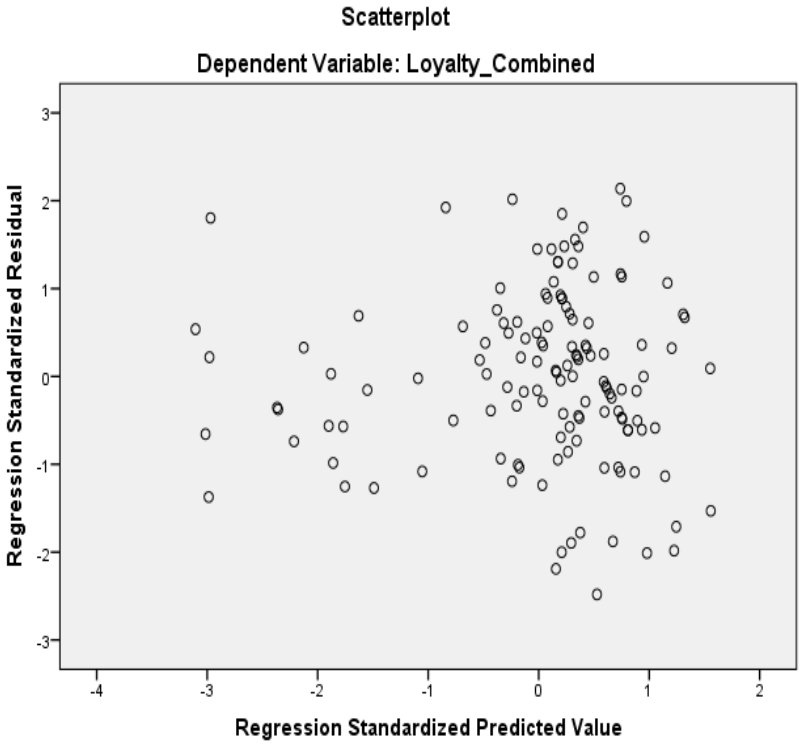


Figure 7-12. Standardised residuals versus predicted scatterplot.

7.10.4. Results of the bootstrapping analysis

The histogram and P-P normality plots demonstrate that the residuals conform to a normal distribution. This is important for the model to be considered accurate and generalisable to the wider population. However, based on the pattern of the predicted versus actual residuals plot, there remained some concerns about the possibility of heteroscedasticity. There are several remedial options available to researchers in such a scenario. The most effective technique is to use a robust regression technique that is referred to as ‘bootstrapping’ (Field, 2018).

Bootstrapping is an approach to validating a multivariate model by drawing a large number of sub-samples and estimating models for each sub-sample. These

estimates are then combined to provide re-estimated confidence intervals and significance levels. This approach does not rely on statistical assumptions about the population, but instead makes its assessment based solely on the sample data (Hair *et al.*, 2014). Bootstrapping is classed as a robust technique for dealing with instances of data deviating from a normal distribution. Bootstrapped confidence intervals and significance values do not rely on residual distribution normality or homoscedasticity (Howell, 2012).

The multiple regression was rerun using bootstrapping in SPSS v.24. The number of bootstrap samples selected was the default of 1,000. A comparison of the original multiple regression significance tests and confidence intervals shown in Table 7-14 with those resulting from the bootstrapping in Table 7-19 show nearly identical results. After bootstrapping, the same variables remain significant predictors of loyalty at the same probability level (affective commitment, $p < 0.001$; locked-in commitment, $p < 0.05$; and service quality, $p < 0.001$). The bootstrapped confidence-interval ranges for the three significant predictors are close to being identical to those in the original model. Value-based commitment remains the only one of the four predictors to have a non-significant influence on loyalty. This provides reassurance that the original results were not unduly biased by the properties of the data.

Table 7-19. Bootstrapped significance levels and confidence intervals

	B	Bias	Std. Error	Sig. (two-tailed)	95% Confidence Interval Lower	Upper
(Constant)	-2.859	0.067	2.085	0.164	-6.659	1.356
Affective commitment	0.633	0.003	0.098	<0.001	0.449	0.829
Locked-in commitment	0.111	-0.001	0.050	0.031	0.010	0.208
Value-based commitment	-0.018	-0.004	0.094	0.835	-0.220	0.152
Service quality	0.407	0.000	0.044	<0.001	0.322	0.495

7.10.5. Results of the hypothesis testing and the final model

The results are supportive of a significant positive relationship of each of affective commitment, locked-in commitment and service quality with CPS-client loyalty. Therefore, H1, H2, and H4 are accepted. Value-based commitment is not shown to be a significant predictor during multiple regression analysis. On this basis, H3 is rejected and the null hypothesis accepted.

7.10.6. Further examination of trust as a loyalty predictor

As discussed in Section 6.6.2., the indicator items originally representing trust exhibited a high degree of cross-loading during PCA. This was problematic to the extent that it was necessary to remove them from the analysis to obtain a clean factor solution. Given that trust was not distilled to a unidimensional construct, including it in the multiple regression analysis would have invalidated the results. However, given that the qualitative analysis results demonstrate that trust is highly associated with loyalty, it was subject to further statistical exploration.

The scores for the five items originally used to denote trust were summated to form a single construct. The resulting trust predictor variable was found to be significantly associated with loyalty via a bivariate correlation analysis ($r = 0.85$, $p < 0.01$). Trust was then entered into a multiple regression equation in SPSS v24 with the original set of predictors. The amount of variance explained by the model containing trust is 87% ($R^2 = 0.872$), which is hardly any more than the original model without it ($R^2 = 0.867$). An examination of the standardised β values shows that service quality remains, by some margin, the strongest predictor of loyalty (SE β = 0.504, <0.001), followed by affective commitment, which also has a similar β value to that in the original model (SE β = 0.356, $p < 0.001$). Locked-in commitment was unaffected by the addition of the trust indicator variable, having a similarly weak β value and the same level of significance as in the original model (SE β = 0.067, $p < 0.05$). Value-based commitment remains a non-significant predictor (SE β -0.019, $p > 0.05$). Whilst trust is shown to be a predictor of loyalty, it is weaker than service quality and affective commitment and with a lower level of significance (SE β = 0.143, $p < 0.05$). Furthermore, the regression diagnostics demonstrate a VIF value associated with trust of 4.59. This suggests that including trust in the multiple regression equation introduced a problematic degree of multicollinearity. Therefore, as well the inclusion of a non-unidimensional construct, the results of the analysis incorporating trust are deemed to be unreliable and subject to bias.

Table 7-20. Regression coefficients with trust added as a predictor variable

Model	Unstandardised Coefficients		Standard-ised Co-efficients			95.0% Confidence Interval for B			
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
(Constant)	-2.884	1.822		-1.582	0.116	-6.489	0.722		
Affective commitment	0.583	0.093	0.356	6.254	<0.001	0.399	0.768	0.305	3.274
Locked-in commitment	0.106	0.051	0.067	2.092	0.038	0.006	0.207	0.970	1.031
Value-based commitment	-0.035	0.084	-0.019	-0.416	0.678	-0.201	0.131	0.458	2.186
Service quality	0.343	0.052	0.504	6.652	<0.001	0.241	0.445	0.172	5.801
Trust	0.233	0.110	0.143	2.120	0.036	0.016	0.450	0.218	4.594

7.10.7. Further examination of locked-in commitment as a loyalty predictor

The original conceptual model had positioned the service-related antecedents as positively influencing client loyalty expressed by repatronage and PWOM. However, PCA resulted in the repatronage and PWOM items being amalgamated into the single outcome variable of loyalty. Given the lack of evidence in the literature for any significant relationship between locked-in commitment and PWOM, it was originally conceptualised as being an antecedent of repatronage only. Therefore, in theory, the PWOM items of the loyalty construct would have a lower level of association with locked-in commitment than would the repatronage

items, potentially leading to a dilution of its impact on loyalty. Therefore, an exploratory statistical analysis was undertaken to investigate this. \Variables were created for repatronage and PWOM using the retained items, representing them by summating their scores. A bivariate correlation in SPSS v.24 shows a non-significant relationship between both locked-in comment and repatronage ($r = 0.45$, $p < 0.01$), and between locked-in commitment and PWOM ($r = -0.15$, $p > 0.01$).

Table 7-21. Correlation of locked-in commitment with PWOM and repatronage

	PWOM	Locked-in commitment	Repatronage
PWOM	1	-0.015	0.885**
Locked-in commitment	-0.015	1	0.045
Repatronage	0.885**	0.045	1

** Correlation is significant at the 0.01 level (two-tailed).

Following the correlation analysis, the predictor variables were entered into a multiple regression equation with repatronage as the outcome variable. Service quality, affective commitment, locked-in commitment and value-based commitment predicted repatronage at similar levels of strength and significance to what they did for loyalty in the hypothesis testing model (Table 7-22).

Table 7-22. Multiple regression of the predictors onto repatronage

	Unstandardised Coefficients		Standardised Coefficients		
Model	B	Std. Error	Beta	t	P
(Constant)	-1.353	1.372		-0.986	0.326
Affective commitment	0.428	0.068	0.411	6.300	<0.001
Locked-in commitment	0.085	0.038	0.084	2.211	0.029
Value-based commitment	-0.033	0.063	-0.029	-0.521	0.603
Service quality	0.242	0.032	0.559	7.673	<0.001

Dependent variable: Repatronage.

The predictor variables were next entered into a multiple regression equation with PWOM as the outcome variable (Table 7-23). Whilst service quality and affective commitment strongly predicted PWOM, locked-in commitment is neither a strong nor a significant predictor. The results of the exploratory correlation and multiple regression analysis suggest that locked-in commitment is a better predictor of the repatronage items in the outcome variable than it is of the PWOM items. The lack of a significant relationship between locked-in commitment and PWOM supports both the original conceptual model based on extant studies and the findings of the qualitative phase of analysis.

Table 7-23. Regression of the predictors onto PWOM

	Unstandardised Coefficients		Standardised Coefficients		
Model	B	Std. Error	Beta	t	P.
(Constant)	-2.632	1.046		-2.517	.013
Affective commitment	0.253	0.052	0.292	4.889	<.001
Locked-in commitment	0.033	0.029	0.039	1.120	.265
Value-based commitment	0.051	0.048	0.053	1.058	.292
Service quality	0.226	0.024	0.628	9.398	<0.001

Dependent variable: PWOM.

It must be stressed that the inferences that can be made from these exploratory findings are limited, given that factorial validity for the repatronage and PWOM constructs is not demonstrated. However, these results are deemed to be of use in partly explaining the relatively weak predictive power of locked-in commitment on loyalty.

7.11. Results of the validation feedback from the questionnaires

At the end of the questionnaire, an optional comments box was provided for respondents to add their own opinions regarding what CPS suppliers could do to get repeat business and recommendations from their clients. The purpose of this was to obtain evidence to support (or disconfirm) the results of the structured (closed-ended) survey. Of the survey respondents, only 13% elected to add their own comments to the optional additional feedback box. The comments made were

attributed by the researcher to the antecedent considered to match the comment most closely. With the exception of locked-in commitment, the evidence from the respondents supports the relationships between the antecedents and client loyalty (Table 7-24). No unexpected findings emerged with respect to unforeseen or new influential antecedents.

Figure 7-13 summarises the degree to which the different antecedents are represented in the qualitative feedback obtained from the surveys. Most respondents (64%) mentioned some aspect of service quality as being important as something for CPS suppliers to focus on to achieve client loyalty. The remainder are split between trust (14%), affective commitment (12%) and value-based commitment (10%).

To a certain extent, these findings validate the results of the hypothesis testing. Support is demonstrated for service quality being the primary driver of CPS-client loyalty. Support is also shown for the influence of affective commitment. However, the respondents also mentioned aspects relating to trust and value-based commitment that were not amongst the significant predictors of loyalty resulting from the hypothesis testing.

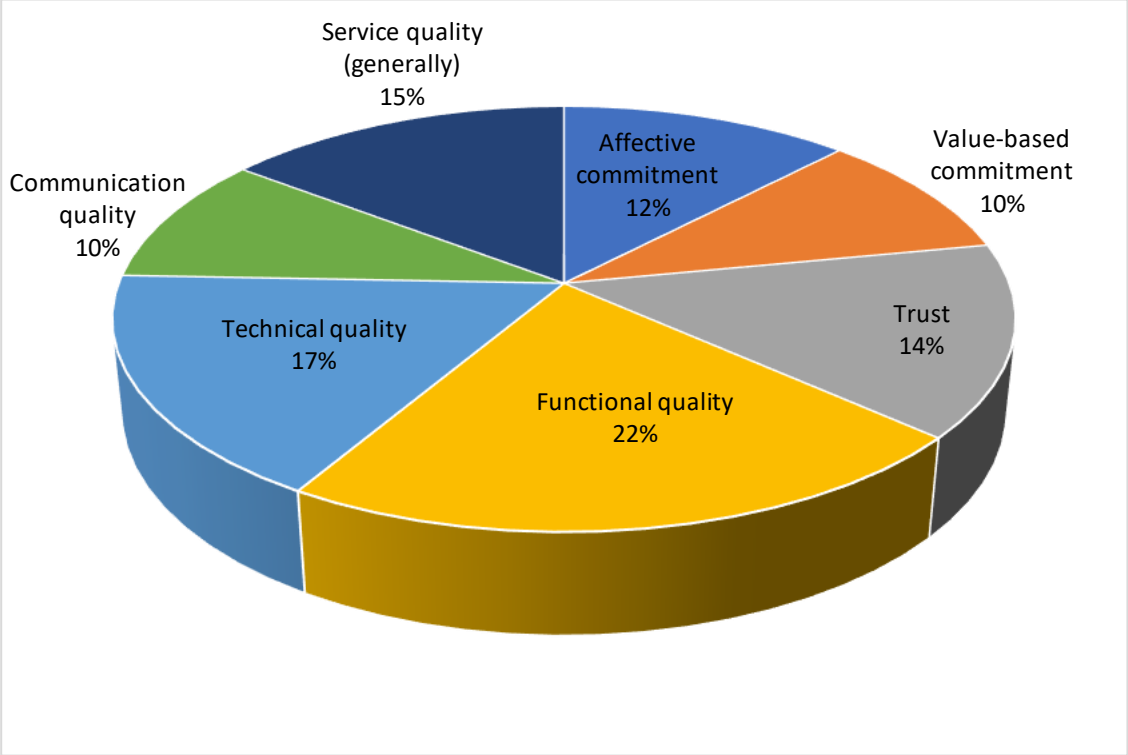


Figure 7-13. Summary of the qualitative feedback section of the survey.

Table 7-24. Results of the qualitative (free-text) feedback section of the survey

Case	Comment	Attributable antecedent
35 72 100 105 131	*Develop relationships* *Be approachable at all times* *Less adversarial* *A good rapport* *Repeat business is about being easy to work with*	Affective commitment
[No comments indicating its importance]		Locked-in commitment
1, 105 7 35 61	*Provide value for money* *Demonstrate value for money* *Add value* *Value engineering at design or scope change*	Value-based commitment
52 87 100 121 131	*Be honest if things don't go to plan* *Competency, honesty and reliability* *More of a partnering relationship* *Be honest* *Repeat business is about being (.) reliable.*	Trust
6 9, 61 18 65 100 105 121 121	*Provide documentation on time* *Flexibility* *Delivered on time* *Professionals who are proactive and efficient* *Be responsive to our requests. Manage work within timescales.* *Timely responses* *Be as flexible as possible* *Be accurate with quoted timescales*	Functional quality
1 5 6 9 72 1 6 	*Understand the client's needs* *Consistent, in-depth knowledge* *Provide documentation (.) complete* *Work within budget constraints. Maintain timeframes and meet target dates.* *Be attentive to the client's requirements and brief* *Deliver contracts well* *Key for us is well-administrated contracts*	Technical quality
1 35 72 105	*Ensure the client also understands your needs* *Excellent levels of communication* *Keep the client fully informed if progress will not meet expectations* *Ask which aspects are most important*	Communication quality
18 25 52 105 121 131	*Good quality service* *Quality of work* *Focus on the deliverables* *Quality* *Deliver a high-quality service* *Likely a cliché but get the basics right*	Service quality (generally)

7.12. Chapter conclusion

This concludes the quantitative analysis results chapter. Several profound results arose from the data analysis. Firstly, factor analysis demonstrated that in the context of this study, service quality is a unidimensional construct, rather than being composed of separate sub-constructs, as proposed in the conceptual model. The items representing trust have been found to be highly interrelated with those representing other predictor variables. Therefore, despite strong evidence from the qualitative phase of the analysis for trust being an important loyalty antecedent, it was necessary to exclude it from the quantitative analysis to obtain a clean factor structure suitable for hypothesis testing.

Despite the argument made in Chapter 3 for PWOM and repatronage being empirically and conceptually distinct, their representing items loaded onto a single factor that was subsequently named 'loyalty'. The overall outcome has supported the use of EFA, given the differences between the theorised and actual factor structure.

The hypothesis testing via multiple regression analysis demonstrated that most service-related antecedents resulting from factor analysis are statistically significant predictors of client loyalty. The exception to this is value-based commitment, which was neither a strong nor significant predictor.

Evidence from the free-text (qualitative) comments section broadly supports the results of the hypothesis testing. However, discrepancies were found between the results of the qualitative and quantitative phases with respect to trust and value-based commitment. Chapter 7 explains the follow-up validation work undertaken to further investigate these findings.

Chapter 8. Validation of results

8.1. Chapter introduction

The chapter firstly provides a recap of the measures taken during this research to ensure the reliability and validity of the results. Following this, an explanation is given regarding the additional qualitative investigation work undertaken to help explain and validate the findings. Whilst some of the results from the qualitative phase of the research generalised well when tested in the wider population, several discrepant findings were identified. Details are presented on how these were investigated during the validation stage.

8.2. Reliability of the results

8.2.1. Reliability of the qualitative research phase results

Researchers should be able to demonstrate the reliability of their findings. A key criterion for the reliability of qualitative research methods is consistency (Leung, 2015). To help ensure this, the 20 interviews were conducted using a set of guiding questions, so that data were gathered in a consistent manner. Furthermore, all interview transcription was undertaken personally by the researcher. This avoided the risk of inconsistency, which can occur where there are multiple transcribers contributing to the same research data.

8.2.2. Reliability of the quantitative research phase results

Reliability in a quantitative research context can be defined as the extent to which the same results would be achieved if the same study were repeated over a certain period (Ahmed and Opoku, 2016). One way of determining this is replication. This involves repeating the research using the same questionnaire to collect data from the same sample. A drawback of this approach is that it is difficult

to replicate the process exactly. This is especially so in research that seeks to study social phenomena such as attitudes and behavioural intentions (Bandalos, 2018). Furthermore, it was unrealistic to expect all respondents to repeat the same survey again. The reliability of the measures used in this research was therefore assessed via statistical means.

Table 7-12 in Chapter 7 shows the results of the reliability testing using Cronbach's α in SPSS v.24. All scales are demonstrated to have a high degree of inter-item reliability.

8.3. Validity of the results

8.3.1. Validity of the qualitative research phase results

Validity, in general terms, can also be defined by the degree of confidence researchers and reviewers can have in the findings. In qualitative research, there is more focus on validity and trustworthiness than reliability, with emphasis placed on ensuring that the accounts obtained from interviews provide an accurate reflection (Creswell and Plano-Clark, 2011). Qualitative validation was obtained through triangulation from several subject sources, and accounting for negative cases and disconfirmatory evidence during the analysis process. The guidance of Braun and Clarke (2013) was followed by setting the target of 20 participants, a number judged suitable for the purposes of determining patterns and relationships in a trustworthy manner. Whilst it is inappropriate to make generalisations from qualitative research, the transferability of the findings was maximised by using a sufficiently large sample of participants from the Midlands with rich experience of CPS supplier-client relations. Furthermore, the interviews only ceased after confirming that a sufficient degree of saturation had been reached.

8.3.2. Validity of the quantitative research phase results

There are several aspects of quantitative research validity. From a general perspective, validity is associated with the degree to which the methods measure what they are intended to measure (De Vaus, 2013; Saunders, Lewis and Thornhill, 2019).

The findings of the qualitative analysis were used to inform the development of constructs for the quantitative analysis. This is a common approach used by researchers to build validity into the measures used for surveys (e.g. Cater and Cater, 2009; Sarapaivanich and Patterson, 2015). Additionally, methods such as expert review and pilot testing were employed to ensure the content validity of the survey instrument. Factor analysis was undertaken to ensure that the formative items for the constructs were unidimensional. Measures were taken during the hypothesis testing to safeguard the validity of the results. This included a detailed examination to guarantee that the findings were not biased due the properties of the data.

It was necessary to limit the claims made from the research findings to the population sampled. This came at a cost of limiting the external validity (generalisability) of the findings to the client population in the UK Midlands. However, a trade-off of this nature this was considered necessary, and it is often necessary in research involving social phenomena (Kelly, 2004).

Hair *et al.* (2014) suggested several means of validating statistical models of relationships between variables, as was proposed in this research. The first of these is examining the extent to which the results match an existing model or set of previously validated results on the same topic. However, no similar studies could be found. Therefore, whilst the results could be contextualised and compared to findings in other fields, validation against extant empirical studies on

CPS client-supplier loyalty was not possible. Another recommended validation method via data analysis is splitting the sample and using one part for the main analysis and the other part for validation purposes. On balance of advantages and disadvantages, it was decided not to adopt this method, given that the sample size achieved was only just large enough for the purposes of the factor analysis.

8.4. The need for additional validation work

Due to several discrepant findings and the need to demonstrate a robust approach, additional validation-assessment work was deemed necessary. This was achieved using member checking, followed by a focus group. Opinions on the usefulness of such an approach vary. For example, Thomas (2017) argued that, whilst carrying out follow-up work of this nature is commendable, it is of little benefit in validating research involving theory development or generalisation.

Notwithstanding such opinions, it is considered robust academic practice to review the results via the input of experts or participants as part of the validation process (Ahmed and Opoku, 2016). Other built environment researchers have employed a follow-up phase of member checking to validate quantitative findings (e.g. Chen and Mohamed, 2008). The methodology adopted in this research was a qualitative exploration, followed by a quantitative study, with a final qualitative validation phase. This approach has been adopted in other peer-reviewed studies focusing on social and behavioural aspects within the built environment (e.g. Ljasan and Ahmed, 2016).

8.5. Member checking

8.5.1. The use of member checking

Member checking involves going back to the participants from the qualitative phase of analysis and obtaining their feedback on the overall research findings. In

doing so, researchers can check that the results accurately reflect the participants' experiences (Creswell and Plano-Clark, 2011; Saunders, Lewis and Thornhill, 2019). This is a commonly used approach for determining transferability and trustworthiness (Creswell, 2013). It was also appropriate for this research, given that Wagner *et al.* (2012) stated that follow-up member checking is useful for evaluating discrepant results between the qualitative and quantitative phases of mixed methods research studies.

8.5.2. Member checking method

A report was prepared for the purposes of member checking (Appendix H). It consists of a summary of the research findings, followed by a respondent feedback section. Ten participants were selected from the 20 original respondents in the qualitative analysis phase, using the random number generator tool in MS Excel. Of the 10 original participants contacted with a request to provide feedback, five responded by providing a completed validation report. The results for each of the validation questions were collated in an NVivo 11 file.

Figure 8-1. Validation phase respondents

Identifier	Job Title	Demographics	Experience
Participant A	Estates manager	Male. Undergraduate degree qualified. Professionally qualified (MIEE).	25 years' experience managing public sector estates and facilities. No private sector experience.
Participant B	Developments manager	Male. Undergraduate degree qualified. Professionally qualified (MRICS).	10 years' experience of managing construction projects in the public sector. 26 years in private practice as a surveyor and project manager.
Participant K	Firm director	Male. Undergraduate degree qualified. Professionally qualified (FRICS).	15 years' infrastructure construction and surveying experience. 10 years' private practice surveyor experience.
Participant L	Housing and corporate asset manager	Female. Undergraduate degree qualified. Professionally qualified (MRICS).	10 years' private practice surveyor experience. 23 years' local authority property management experience
Participant Q	Project manager	Male. Undergraduate degree qualified. Professionally qualified (MRICS).	15 years' private practice surveyor experience. 20 years' public sector project manager experience.

8.5.3. Results obtained from the member checking

All five respondents agreed with the finding that service quality is a strong and significant predictor of CPS-client loyalty. Participant B (developments manager) provided an example of a CPS supplier deemed worthy of client loyalty, having "*provided a quick response and always provided the best solutions in difficult situations*". This is resonant of both functional and technical aspects of service quality for CPS suppliers.

All five respondents also agreed with the finding that affective commitment is a strong and significant predictor of client loyalty. Participant B (developments manager) provided an example of a CPS supplier to which he felt he could "*pick*

up the phone and talk in an easy, comfortable style". The example given uses the medium of a phone call to illustrate the point. However, it is considered to validate the influence of affective commitment (liking and rapport) more so than it does communication quality, given how both concepts were operationalised in this research. Communication quality was represented by the ease of contacting the CPS supplier and their ability to explain technical concepts in a meaningful way.

Whilst Participant L (housing and corporate asset manager) supplied feedback validating affective commitment as a significant predictor of client loyalty, she qualified her response by stating that "*I would still use a CPS if rapport and likeability were absent if the overall service they provided was excellent*." This echoes several respondents' statements in the qualitative phase of the research. Affective commitment is a welcome element of the service but does not appear to be a mandatory requirement for client loyalty in the same way that service quality appears to be.

All five respondents agreed with the finding that locked-in commitment is a significant predictor of CPS-client loyalty. However, very little information was received on the feedback forms to help explain these opinions.

For value-based commitment, the member checking findings are mixed. Three out of the five respondents agreed with the finding that value-based commitment is not a significant factor in determining client loyalty. Unfortunately, only one of the three respondents (Participant L, housing and corporate asset manager) explained why, stating that "*value for money is considered more when initially selecting a CPS supplier. During a relationship, ongoing performance is the main criteria as opposed to VFM [value for money]*." Two of the respondents disagreed with the finding. Participant K provided an explanation stating that "*all clients have budgets*", implying that, in his experience, value for money did influence client loyalty.

All but one of the five respondents declared that they would have no compunction about recommending a supplier that they felt was worthy of being awarded future commissions. Only Participant L (housing and corporate asset manager) expressed reluctance, explaining that "*recommending suppliers is dangerous, as it is for the procuring organisation to do their own due diligence*". This echoes a minority of respondents' views expressed during the main qualitative analysis with respect to the risks to one's own reputation associated with recommending others.

Based on the results of the factor analysis, it was felt that trust had been operationalised in an overly complex manner during the quantitative research phase. Therefore, one of the member checking question sets was designed to further explore the concept of trust in a CPS supplier-client relationship context. A dimension of trust mentioned by all the participants is confidence in the supplier's ability to undertake the service without supervision and monitoring. By way of example, Participant L (housing and corporate asset manager) stated that a trusted CPS supplier was one that could "*deliver the service without the need for excessive supervision and monitoring*". Participant B (developments manager) commented that "*trust means being able to allow them to work without direct monitoring*". Aligned with this, Participant A (estates manager) said that it was about "*being able to spend more of your time doing other duties*" due to the trust engendered in the supplier.

In summary, the findings of the validation report broadly support the results of the hypothesis testing. However, the findings regarding value-based commitment are inconclusive. Furthermore, the questions regarding the concept of trust remain unresolved. For this reason, it was decided that another round of validation checking was necessary, using a focus group.

8.6. Focus group

8.6.1. The use of focus groups

Whilst the results of the member checking are insightful, some questions remained that required further consideration. The use of focus groups is recommended where the topic is defined clearly and there is a specific issue to be considered (Saunders, Lewis and Thornhill, 2019). In the case of this research, it was to explore the discrepant results and to acquire feedback from a group of experts on the wider findings. Barbour (2007) argued that focus groups can be of use in assisting the interpretation of anomalous findings from quantitative research. Using focus groups, researchers can "*get in tune*" with participants' realities and collect their interpretations (Mazzarol, Sweeney and Soutar, 2007, p. 1479). Focus groups have been used in other built environment studies, as they elicit general experiences, opinions and viewpoints that can be very insightful (Love *et al.*, 2008).

8.6.2. Focus group method

Saunders, Lewis and Thornhill (2019) recommended that focus groups should be made up of participants who are likely to be rich in information. The focus group membership for this research consisted of seven CPS clients, obtained via purposive sampling. All participants had sufficient expertise, having between 8-32 years' experience of acting as a client in a CPS-supplier context.

The focus group was held at the company premises of (SGS), which kindly made a meeting room available to the researcher on 15th November 2019. The venue was chosen as it was considered to be neutral from the perspective of the participants and was located conveniently. The researcher acted as the focus group's moderator. A short presentation was delivered to the focus group

members, explaining the purpose of the research and a brief overview of the subsequent findings. They were each provided with a copy of the summary report in Appendix H.

When running focus groups, there is a risk that if the discussions are too strictly directed by the researcher's questions, group exploration may be stifled. Conversely, without sufficient steering, the discussions may fail to produce the data required to achieve the researcher's objectives. A hybrid approach was used, as defined by Acocella (2012). This involved describing the research findings and then allowing the group to consider them with minimal researcher interjection. The participants were invited to introduce themselves and their experiences, to help establish a relaxed atmosphere. The researcher delivered a short presentation, explaining the research results before moving on to the questions in Appendix H, which were used to frame the group discussions. The group members were given freedom to discuss the issues, provide reflective comment and arrive at a shared understanding based on their collective experiences. All participants appeared confident and enthusiastic during what was a healthy debate. No researcher intervention was necessary during the discussions, as no individuals were overly domineering or reticent.

The session lasted 55 minutes, and the discussion was recorded using the Voice Record Pro IOS app. The transcription of the focus group's discussion was undertaken by the researcher. The information obtained was then reviewed as part of the validation process.

8.6.3. Focus group findings

There was a unanimous consensus amongst the group on the importance of service quality in achieving client loyalty. This was exemplified by a participant commenting, "*At the end of the day, it's what they deliver and how quickly they can*

deliver it. That's what makes me go back for more." Evidence was also obtained that broadly supports the finding that affective commitment is an important antecedent of loyalty to CPS suppliers. One participant stated, "*You have to get on with them, don't you?*" However, as the discussion developed, it emerged that the participants did not feel that affective commitment was an essential part of delivery as was the case for service quality. This was exemplified by the comment of one participant on the topic of CPS-supplier likeability and rapport, who declared, "*Just to be clear, though, it is not the be-all and end-all*." This was met with general agreement from the rest of the group.

The concept of locked-in commitment was explained to the group and their opinions sought on its potential influence on loyalty. Evidence was obtained on their collective concerns about the cost, time and risk associated with terminating established relationships with CPS suppliers. The phrase "*better the devil you know*" (an expression that arose frequently during the initial phase of qualitative research) resurfaced. An example comment from a participant with respect to an incumbent M&E consultant was "*Their knowledge of the sites across [client organisation estate] is second to none, and so replacing them would be difficult*." However, another participant was adamant that such concerns did not impact his decision-making, stating, "*I don't agree. If I don't want them, I just get rid of them. Simple as that!*" Whilst the evidence from the group suggests that locked-in commitment is not the primary driver of their loyalty to CPS suppliers, all but one participant stated that there had been occasions when constraint-based factors had influenced their decision-making.

Most participants expressed surprise that value-based commitment had not been shown to be significant predictor. This is demonstrated by the comment of a participant who announced, "*That <u>is</u> surprising. If I didn't feel I was getting good value for money, I would consider putting it back out to tender*." The concept of

value was subject to debate. After considerable discussion, it became apparent that service quality and value were inexorably entwined in the minds of the participants. This was illustrated by one of clients saying, "*This QS firm I'm using are just great. [.] Little bit dearer than the last one, but the service is first class. You get what you pay for, don't you?"*

The concept of client loyalty was put to debate. The purpose of this was to explore the finding that loyalty is a unidimensional factor consisting of both repatronage and PWOM. The participants were asked if they would recommend a CPS supplier that they also intended to award future commissions to. None of the participants expressed any reservations in doing so. This was challenged by the researcher, using anonymised examples of the minority of clients from the initial qualitative research who were unwilling to recommend a CPS supplier due to self-perceived risk. This was met with apparent derision. An example of this was the response of a participant who opined, "*That's a bit mean, isn't it? I would always recommend the ones I use on my jobs.*"

The participants collectively expressed the view that trust is an element of the supply relationship missing from the list of service-related antecedents of CPS-client loyalty. One participant stated, *"If I couldn't trust them, I don't want them on my job!"* Another maintained, "*I need to know I can trust them to deliver if I am going to give them any more work*." The concept of trust in a CPS supplier-client context was explored using feedback from the group. The dominant trust sub-theme was trust in the supplier to work without direct supervision and monitoring, echoing the findings of the member checking phase. Other dimensions that the group felt are representative of trust are "*competency*" and "*honesty*". None of the group made any reference to the "*client's best interests at heart", "confidence*" or "*expertise*" sub-themes used to operationalise trust during the quantitative phase of the research.

In summary, the findings of the focus group align with those obtained from member checking. Both provide evidence validating service quality and affective commitment as important service-related antecedents of CPS-client loyalty. Whilst not as strong, evidence was found supporting locked-in commitment being a client-loyalty antecedent in situational contexts. Evidence was obtained for a strong association between service quality and value. This supports the methodological explanation for the apparent lack of influence of value-based commitment and loyalty during the hypothesis testing in Chapter 7. Evidence suggested that trust in a CPS supplier-client relationship was less multifaceted than originally conceptualised.

Chapter 9. Discussion of the results

9.1. Chapter introduction

In Chapter 8, the overall research results are discussed in context with the expected outcomes, based on the extant evidence and theories. Firstly, the results of the factor analysis carried out during the quantitative data analysis are considered. This phase of data analysis produced several interesting findings that warranted inclusion in the discussion. The chapter next addresses the service-related antecedents in the conceptual model of client loyalty. The results for each antecedent are discussed in turn. The chapter concludes with a discussion of findings with respect to the impact of KCE versus supplier-firm antecedent levels.

9.2. The conceptualisation of variables

9.2.1. The conceptualisation of commitment

As discussed in Chapter 4, commitment has been conceptualised in various ways. In the extant research on professional and wider business-to-business services, commitment is often represented by a single construct expressing the general motivation to maintain a relationship (e.g. Morgan and Hunt, 1994; Geyskens. *et al.*, 1996). In most extant CPS studies, commitment has been considered in an intra-organisational context and conceptualised as a unidimensional construct (e.g. Leung and Chan, 2007; Leung, Chen and Yu, 2009; Mohyin, Dainty and Carrillo, 2009).

This research sought to understand the service-related antecedents of CPS-client loyalty. To achieve this, commitment was conceptualised in a multidimensional form, representing the different motivations for maintaining a relationship. The results of the factor analysis demonstrate factorial validity for a multidimensional

conceptualisation of commitment in a CPS-client context, consisting of affective commitment, locked-in commitment and value-based commitment. These findings align with those of Cater and Zabkar (2009), who empirically demonstrated a multidimensional model of commitment consisting of both affective and locked-in dimensions in a business-to-business professional service context.

Normative commitment (the fourth commitment dimension of the original conceptual model) was excluded from the quantitative follow-up study. This was based on the findings of the initial qualitative research phase, during which very little evidence was found for its existence in the context of CPS supplier-client relationships. Whilst normative commitment has been found to be an empirically distinct construct in wider studies (e.g. Cater and Zabkar, 2009; Cater and Cater, 2010), Keiningham *et al.* (2015) argued that it is very similar to affective commitment. In a review of the wider research into commitment, Bergman *et al. (*2006) stated that the two constructs are often highly correlated and that their distinguishability is in question. It is therefore likely that problems would have arisen with items cross-loading during the factor analysis had normative commitment been included in the quantitative study. The lack of evidence for its relevance, together with its apparent empirical inseparability, appear to support the decision to exclude it from the quantitative follow-up phase of this research.

9.2.2. The conceptualisation of service quality

The measurement of service-quality perceptions has been described as "*among one the most debated and controversial topics*" in services research (Caceres and Paparoidamis, 2007, p. 840). Service quality has been conceptualised in several ways. Based on the evidence from wider professional service studies (e.g. Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015), service quality in this research was originally conceptualised as comprising several distinct constructs.

The intended purpose of this was to examine the differential impact of the technical quality (i.e. what is delivered), functional quality (i.e. how it is delivered) and communication quality on client loyalty. However, the factor analysis showed that their items loaded onto the same factor. This led to the development of a single service-quality construct. Thus, the multidimensional conceptualisation of professional service quality proposed in the conceptual model for this research was not supported. Instead, the findings of this research support the findings of other business-to-business studies that conceptualised and empirically demonstrated service quality to be a unidimensional construct (e.g. Molinari, Abratt and Dion, 2008; Chenet, Dagger and O'Sullivan, 2010).

There are several reasons proposed regarding why the different aspects of service quality formed a unidimensional construct in this research. Caceres and Paparoidamis (2007) maintained that the concepts of functional and technical quality (developed originally by Gronroos [1984]) were not intended to be an operational model. Rather, they claimed that it was developed as a theoretical tool to help academics and practitioners understand the service process itself and help resolve client problems. The counterargument to this is that functional quality, technical quality and communication quality have been demonstrated to be distinct constructs via factor analysis in other professional service studies (e.g. Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015).

Another possible explanation for the unidimensionality of service quality is that CPS were studied collectively. This had implications on the design of the scales used to represent the service-related antecedents. As discussed in Chapter 5, efforts were made to ensure that the scales were appropriate for the study's context. This followed the guidance of Caceres and Paparoidamis (2007), whoargued against the use of generic service-quality scales, and instead recommended that they are adapted to the industry being studied. Service-quality

perceptions are likely to be highly industry and context specific (Molinari, 2008). However, out of necessity, the questionnaire's item wording was kept sufficiently broad to be appropriate for the different CPS sub-professions. In contrast, Prakash and Phadtare (2018) developed a multidimensional service-quality scale in a CPS context, but for only the architecture sub-profession. This allowed them to develop the scale items with a high degree of service specificity. For example, items such as *"[the supplier] provides appropriate functionality in building design*" (Prakash and Phadtare, 2018, p.678) would have been inappropriate in this research, as the population included clients of non-design CPS professionals. Therefore, it is proposed that the use of more-generic scale items in this research may have reduced the distinction between its different facets, such as 'what' service was delivered and 'how' this was done.

9.2.3. The conceptualisation of loyalty

Loyalty was originally represented in the conceptual model by two separate concepts: repatronage and PWOM. The rationale for this was that they are conceptually distinct and should be considered as desirable-but-separate loyalty outcomes (Watson *et al.*, 2015). Furthermore, this duel-faceted model of loyalty has been validated empirically in other professional service studies (e.g. Cater and Cater, 2010) and wider business-to-business services studies (Lam *et al.*, 2004; Rauyruen and Miller, 2007). However, the factor analysis carried out during this research demonstrated that the PWOM and repatronage items loaded onto the same factor. This supports the studies that have operationalised loyalty by way of a fused construct that combines repatronage and PWOM items (e.g. Zeithaml, Berry and Parasuraman, 1996; Caceres and Paparoidamis, 2007; Cater and Cater, 2009; Cater and Zabkar, 2009).

Evidence from a minority of respondents interviewed during the qualitative phase suggested that clients may be disinclined to recommend CPS suppliers to others, despite demonstrating a high degree of repatronage loyalty towards them. The main reason for this appears to be concern about a dilution of service quality should the CPS supplier become overstretched after an influx of additional orders from new clients. However, most respondents stated no such inhibition, confirming that they would willingly recommend their preferred CPS suppliers to others by way of reward for the service delivered. This is broadly supported by the findings of the validation via member checking and the focus group.

The theoretical implication is that this research provides support for a single loyalty construct in a business-to-business CPS context. The practical implication is that clients will also provide recommendations and referrals to CPS suppliers that they deem worthy of being awarded future commissions. Conversely, clients are highly unlikely to advocate a CPS supplier that they consider unworthy of service patronage. Indeed, there is a risk of damaging negative WOM impacting on them winning new business, given that people are even more likely to mention a bad experience than a positive one (Desatnick, 1987).

9.3. Discussion of service-related loyalty antecedents

9.3.1. Service quality as a predictor of loyalty

The results of the multiple regression analysis illustrate that, of all the antecedents, service quality was the strongest predictor of CPS-client loyalty (SE $\beta = 0.597$, $p < 0.001$). This was an expected finding, based on the results of the qualitative research phase, during which all respondents stressed how important service quality is in achieving client loyalty. The results from the validation stage also support the overall results for service quality. Therefore, the findings from the

qualitative analysis generalised well to the quantitative follow-up study of the wider population.

These results underpin other professional service research, which identified service quality as being an important driver of client loyalty (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015), as well as research on wider business-to-business services (Zeithaml, Berry and Parasuraman 1996; Lam *et al.*, 2004; Rauyruen and Miller 2007). The results support the assertion that service quality is of overriding importance to service providers seeking to build client loyalty (Fullerton, 2003). A note of caution is that service quality has been operationalised in many different ways. This should be accounted for when making like-for-like comparisons between studies.

The results also endorse the limited amount of evidence available for service quality in a CPS-client context. Akinsiku (2016) stated that, for quantity surveyors, service quality is the main way in which firms can differentiate themselves from their competitors. In this research, service quality was operationalised by the degree to which CPS suppliers fulfil the client's core needs, as well as the manner of its delivery. This supports the argument of Boyd and Chinyio (2006), who posited that the identification and delivery of construction clients' requirements is a fundamental prerequisite for supplier success.

One of the key areas of professional service research is the impact of information asymmetry on perceptions of service quality. Due to the complexity and intangibility of professional services, it has been reasoned that functional quality ('how' a service is delivered and/or communicated) may be used as a proxy by inexperienced clients during their assessment of core-service-quality outcomes (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015). Whilst it was not a stated aim of this research, it would have been interesting to examine the impact of information asymmetry on service-quality perceptions and loyalty.

However, this could not be undertaken for two main reasons. Firstly, service quality was found to be a unidimensional variable via the factor analysis. Therefore, the differential impact of technical, functional and communication quality on client loyalty could not be examined. Secondly, the degree of information asymmetry between CPS suppliers and clients appears to be low. During the qualitative research phase, it was striking how confident most respondents were in their own ability to evaluate service quality. With respect to the quantitative research phase (as demonstrated in Figure 6-3), the surveyed cohort was dominated by clients with several years of experience in dealing with CPS suppliers. Therefore, the population sampled in this research was more capable of evaluating core-service quality (technical quality) without relying on other cues to do so.

As discussed in Chapter 5, there was reliance on job titles when accessing the CPS-client population. The sample includes several individuals with the term ‘coordinator’ or ‘deputy’ in their job title. However, most had job titles that include the term ‘manager’ or ‘director,’ implying seniority and, by inference, a significant degree of experience. Therefore, the sampled population may have been skewed towards those who were more experienced, given that those individuals were easier to identify and access. Researchers seeking to examine information asymmetry would be advised to ensure that inexperienced clients are represented in their sample. This may prove practically challenging, based on this researcher’s difficult experience of accessing the wider CPS-client population.

To summarise this section, the results demonstrate that service quality was the strongest predictor of CPS-client loyalty in this research. As explained further in this chapter, clients are undoubtedly influenced by their friendships and relationships with CPS suppliers. However, it would appear that, first and

foremost, they are rational in their decision-making, putting the fulfilment of organisational and project goals first.

9.3.2. Affective commitment as a predictor of loyalty

The results of the hypothesis testing show that affective commitment was a strong and significant predictor of CPS-client loyalty (SE $\beta = 0.386$, $p < 0.001$) in this research. This supports evidence from the qualitative phase of the research, which associated affective commitment with client loyalty. This relationship is also supported by evidence obtained from the validation stage. Therefore, the findings from the qualitative analysis generalised well to the quantitative follow-up study of the wider population.

Whilst affective commitment was a weaker predictor of client loyalty than service quality, the results reveal the importance of likeability and rapport. This was an expected finding, based on the evidence demonstrating a link between affective commitment and client loyalty in other professional service settings (Cater and Cater, 2010) and wider business-to-business services (Morgan and Hunt, 1994; Gwinner, Gremler and Bitner, 1998). Furthermore, the findings of this research support evidence from other studies (e.g. Frow, 2007) that found affective commitment is more important than normative commitment or locked-in commitment in client-professional relationships.

As identified during the professional-trait analysis in Chapter 2, the delivery of CPS involves a high degree of supplier-client interaction. The inference from this is that relational antecedents, such as affective commitment, are paramount in achieving client loyalty. However, the results illustrate that service quality was the strongest loyalty predictor in this research. Furthermore, evidence obtained from the qualitative research and the validation phase demonstrates that affective commitment is by no means essential to clients in the same way that service

quality is. This differs from the findings of Cater and Cater (2010), who maintained that affective commitment is the strongest predictor of client loyalty in their business-to-business professional service study.

In a CPS-supply context, affective commitment appears to be an 'order qualifier' rather than an 'order winner.' Thus, personal relationships and rapport help maintain the supply relationship, but are not enough to preserve it in the absence of sufficiently high levels of service quality. However (in common with service quality), affective commitment remained a strong and significant predictor of loyalty in this research, whatever combination of variables were entered into the multiple regression equation. This indicates that it is more than merely a welcome add-on to the service. In summary, the results of the hypothesis testing show affective commitment to be a strong and significant predictor of CPS-client loyalty. This was expected, based on evidence from the literature and the qualitative analysis findings.

9.3.3. Locked-in commitment as a predictor of loyalty

Locked-in commitment was found to be a weak-but-significant predictor of client loyalty during the hypothesis testing (SE $\beta = 0.069$, $p < 0.05$). This aligns with the findings from the qualitative phase of research, which suggest that, in certain situations, constraint-based factors (the risk and cost associated with termination) serve to anchor CPS supply relationships. The association between locked-in commitment and client loyalty is also supported by evidence obtained during the validation stage. Therefore, the findings from the qualitative analysis generalised well to the quantitative follow-up study of the wider population.

Locked-in commitment was found to be a weaker antecedent of loyalty than either service quality or affective commitment in this research. The results of the exploratory statistical analysis suggest that locked-in commitment was a stronger

predictor of repatronage than it was of PWOM in this research. This is thought to partly explain why it was a relatively weak and only barely significant predictor of loyalty. However, even when undertaking exploratory statistical analysis using an outcome variable composed of only repatronage items, locked-in commitment remained a relatively weak loyalty predictor.

There is mixed evidence in extant research regarding the relationship between locked-in commitment and loyalty. Some studies support the findings of this research, including that of Levy and Lee (2009), who found a link between constraint-based anchors and clients' repatronage intentions in the property services industry. Additionally, Cater and Cater (2010) reported a positive relationship between locked-in (calculative) commitment and the repatronage intentions of clients in wider business-to-business professional services. In the construction industry, clients have been shown to be more committed to relationships with suppliers where the costs of leaving are high or there are few alternatives available (Jiang, Henneberg and Naude, 2011). However, the findings of several other studies identify no significant association between locked-in commitment and client loyalty. These include those from other professional service industries (Cater and Zabkar, 2009) and the wider business-to-business service sector (e.g. Gounaris, 2005; Rauyruen and Miller, 2007). Commitment arising out of a sense of dependence creates relatively weak and less-durable relationship bonds. Construction clients have an aversion to dependence on the technical solutions of a single supplier (Gadde and Dubois, 2010).

Despite representing apparently conflicting attitudes, dependence and relational antecedents (such as affective commitment) are not necessarily mutually exclusive. Indeed, dependence in relationships between construction clients and suppliers can be a relationship catalyst, with affective bonds being forged as the relationship develops (Jiang, Henneberg and Naude, 2011). This provides support

for how the constraint-based antecedent of locked-in commitment can co-exist in the same CPS supplier-client relationship model as affective commitment. However, evidence from other sectors suggests that, where the locked-in dimension is too dominant within the commitment mix, it can cause resentment, undermining any beneficial effects for the supplier (Fullerton, 2003).

The qualitative phase of this research provided rich insights into how clients could feel locked into a CPS supplier. Whilst there is apparently no lack of firms offering CPS, it seems clear that, once a service relationship has been established, anchors can develop that inhibit its dissolution. As suppliers of "*knowledge intensive business services*" (Jewell, Flanagan and Anac, 2010, p. 235), CPS suppliers develop bespoke solutions, as well as often holding unique process or asset knowledge. Thus (as Participant S stated during the qualitative research phase), they "*become engrained in your process*" and become difficult to replace. Even if a client has no fondness for a supplier, they may be minded to think it is "*better the devil you know,*" which is a specific sub-theme that recurred frequently during the qualitative research and validation phases. Based on the findings of the factor analysis and hypothesis testing, the way locked-in commitment was operationalised in this research was deemed appropriate, and it should require minimal modification for use in future CPS research.

9.3.4. Value-based commitment as a predictor of loyalty

Value-based commitment represents the client's rational motivation for achieving value for money on behalf of their employing organisation. It was associated with loyalty in most of the accounts of participants interviewed during the qualitative analysis phase. Furthermore, value-based commitment was significantly associated with client loyalty when examined using bivariate correlation analysis.

However, it was found to be neither a strong nor a significant predictor of loyalty during hypothesis testing. The results from the validation-assessment stage partly suggest that value-based commitment is indeed associated with client loyalty. This demonstrates a disparity between the qualitative and quantitative findings. DiLoreto and Gaines (2016) recommended that researchers look for methodological explanations for discrepant results when undertaking mixed methods research. Based on the findings of the validation assessment, together with an examination of the quantitative results, statistical factors may partly explain the negative result for value-based commitment found during the hypothesis testing.

As explained in Chapter 4, value-based commitment was conceptualised and operationalised as a rational cost-benefit assessment in accordance with other key business-to-business studies (Sharma, Young and Wilkinson, 2006; Cater and Cater, 2010). The results from the quantitative analysis identify that value-based commitment was even more highly correlated with service quality than it was with loyalty in this research. A psychological association of value with service quality may explain the high degree of shared variance between the two variables. Other scholars have also encountered difficulties when researching value-based concepts. Cater and Cater (2010) have also determined value-based commitment to be a weak and non-significant predictor of loyalty. Their explanation for this is a suppression effect due to the pattern of shared variance with other predictors. Based on the findings of the exploratory statistical analysis during this research, shared variance leading to a suppression effect is posited to explain the negative result for value-based commitment during the hypothesis testing.

Value in a construction context is complicated and difficult to define and is often conflated with quality and price (McGeorge, Zou and Palmer, 2013). Despite seeming intuitively simple, value is in fact a complex construct that has proved

difficult to operationalise (Ulaga and Eggert, 2006). Perceptions of value and service quality are interrelated and arise in tandem during the co-creation process, according to service-dominant logic theory (Vargo and Lusch, 2004). In common with other professionals, CPS suppliers apply their specialist skills and knowledge to client problems during service delivery. The ability of a professional to address their clients' needs shapes the perceptions of value during the scoping and delivery of the service (Chih, Zwikael and Restubog, 2019). Furthermore, Aliakbarlou, Wilkinson and Costello (2017) determined that value and service quality are highly interrelated concepts when explored in a construction context.

When comparing the findings of this research with the literature, there is mixed evidence for the association of value-based constructs with client loyalty. Palihawadana and Barnes (2004) argued that clients operating in the business-to-business sector will seek value for money in order to fulfil institutional goals when selecting service providers. In other professional service studies, value has been positively associated with loyalty when operationalised by repatronage and PWOM (Trasorras, Weinstein and Abratt, 2009), and repatronage alone (Sarapaivanich and Patterson, 2015). However, the findings of other studies provide evidence to the contrary. Non-significant relationships have been found between value-based commitment and client loyalty in several business-to-business professional service studies (e.g. Cater and Zabkar 2009; Cater and Cater 2010). Sharma, Young and Wilkinson (2006) concluded that affective commitment is more important than value-based commitment in developing and maintaining long-term relationships.

In summary, evidence from the initial qualitative phase and the validation phase of this research suggests that there is a positive relationship between value-based commitment and loyalty. However, this could not be demonstrated empirically during the hypothesis testing. Shared variance between value-based commitment and service quality caused a suppression effect, masking the relationship with

loyalty. The complexity of value as a concept and its close interrelationship with service quality is therefore proposed as an explanation.

9.3.5. Normative commitment as a predictor of loyalty

Normative commitment is one part of the four-dimensional model of commitment within the original conceptual model of CPS-client loyalty. It is associated with a moral obligation to be loyal to a supplier, based on a long-standing relationship or prior benefit awarded. Reciprocity has been described as "*a powerful source of influence in interpersonal and inter-organisational relationships,*" meaning that people are morally compelled to return a favour when one has been granted (Fullerton, 2014, p. 660). Some studies examining similar populations have provided evidence for the positive association between normative commitment and client loyalty (e.g. Kumar, Hibbard and Stern, 1994).

The findings of the qualitative research phase of this study show little evidence for the existence of normative commitment or its influence on client loyalty in a CPS context. Therefore, it was excluded from the model and was not included in the follow-up quantitative research phase. The results of this research support the findings of other professional service studies, which found no significant relationship of normative commitment with repatronage and PWOM as separate constructs (Cater and Cater, 2010), or with repatronage and PWOM as a combined construct (Cater and Zabkar, 2009).

Normative commitment is less prevalent in individualist business cultures (e.g. Western Europe, including the UK) compared to the collectivist cultures common to Asian countries (Sharma, Young and Wilkinson, 2006). Some evidence suggests that normative commitment can help to compensate for weaknesses in service quality (Fullerton, 2014). Furthermore, Gilliland and Bello (2002) argued that social-compliance tendencies lead to more durable inter-organisational bonds

than those arising from constraint. However, very little evidence was found for normative commitment existing in CPS supplier-client relationships during the qualitative phase of this research. Therefore, its removal from the already-complex conceptual model prior to the quantitative phase of research was deemed to be justified.

9.3.6. Trust as a predictor of loyalty

Evidence obtained from the qualitative phase of the research suggests that trust was a key antecedent of CPS-client loyalty. This appears to support evidence from other studies citing the importance of trust in maintaining construction supplier-client relationships (e.g. Pryke and Smyth, 2006; Jiang, Henneberg and Naude, 2011; Challender, Farrell and McDermott, 2019). Similarly compelling evidence has been found for the relationship between trust and client loyalty in wider professional services (e.g. Eisingerich and Bell, 2007; Slapnicar, Groff and Stumberger, 2015). However, a unidimensional construct representing trust did not emerge from the factor analysis. Therefore, it was excluded from the final stage of hypothesis testing.

Other researchers have encountered similar problems in developing trust constructs. For example, in the business-to-business loyalty study of Caceres and Paparoidamis (2007), trust was found to cross-load problematically onto commitment during the Exploratory Factor Analysis (EFA). Trust is a socially complex phenomenon, having been attributed many different dimensions in extant research (Jiang, Henneberg and Naude, 2011).

On the basis of the literature review and the findings of the Thematic Analysis, trust was operationalised during the quantitative phase of the research using items representing expertise, ability to work unsupervised, benevolence, honesty and confidence-worthiness. On reflection, it is felt that this was overly complex and that

trust should have been represented in a less multifaceted way. For example, Bove and Johnson (2006) found that a simpler two-dimensional conceptualisation of trust (benevolence and credibility) enhanced its diagnostic and explanatory power. Wagner *et al. (*2012) identified certain compelling findings obtained during their qualitative research phase that did not generalise when tested quantitatively in the wider population. They offer a similar explanation for their discrepant findings; i.e. the manner in which they had operationalised the construct in question during the quantitative phase of their research. Rosenbaum, Massiah and Jackson (2006, p. 131) also encountered problems when researching trust in professional services, which they explained using its complexity as a concept. They advised that others who "*conceptualize trust as a multifaceted construct that is nearly impossible for individuals, and researchers, to assess*" will face difficulties.

Trust has been positively associated with several favourable outcomes for firms in business-to-business markets. However, the validity of these claims is undermined by the inconsistency with which it has been operationalised (Ganesan and Hess, 1997). This has led to conflicting findings in the fields of both construction management (Smyth, 2006) and wider business-to-business research (Belonax, Newell and Plank, 2007). Studies on wider professional services suggest that antecedents such as service quality and commitment are more strongly associated with repurchase intentions than is trust (e.g. Rosenbaum, Massiah and Jackson, 2006). This is not to say that trust is irrelevant in professional service relationships. However, some research suggests that trust is more important early on in a professional service relationship, whereas, in other services, it is perceived as a consequence of experience and familiarity (Spake *et al.*, 2003).

Although trust as a predictor of loyalty was not supported in the follow-up quantitative phase of research, most respondents during the qualitative phase were adamant regarding its importance. Furthermore, the effect of trust in a CPS

context may be more complex than simply being a direct antecedent of loyalty. The frequently cited paper by Morgan and Hunt (1994) identified the mediating effect of commitment between trust and loyalty outcomes. Since this time, the impact of trust on loyalty mediated by affective commitment has been demonstrated in several professional service studies (Cater and Cater, 2009; 2010) and wider business-to-business service studies (e.g. Gounaris, 2005).

In summary, whilst trust was shown to be an important antecedent of loyalty during the qualitative phase of this research, this could not be confirmed during the follow-up phase of quantitative analysis. This was unexpected, with most participants involved in the follow-up validation work expressing surprise or disagreement with this finding. These conflicting findings show that more research is necessary to understand the nature and impact of trust in the context of CPS supplier-client relationships.

9.4. The impact of firm and key contact employee levels on loyalty

Whilst it was not practicable to investigate the impact of multi-level antecedents in the wider population, some valuable insights to this were gained during the qualitative exploratory phase of the research.

Evidence obtained from most participants suggests that likeability and rapport with the KCE was an important antecedent of both client repatronage and PWOM in this research. Whilst no doubt influenced by one or more individual KCE relationships, clients also appeared to have an affinity for the CPS firms collectively. In the same manner, the clients appeared to perceive trust on both an individual (KCE) and a firm level. This partly supports the assertions of Bove and Johnson (2006) that the client's relationship with an individual and their employing firm are related-but-separate facets within the overall relationship. These attitudes can be independent of each other. For example, evidence was obtained from

some clients that they liked and/or trusted a KCE but did not feel the same way about their employing firm. This supports the findings from wider business-to-business services of Anaza and Rutherford (2014), who noted that clients can have independent perceptions about KCEs and the supplier firm. Attitudes towards each can influence decision-making with respect to repatronage and PWOM.

Relationships between clients and CPS suppliers are more resilient where there are multiple points of contact rather than a single KCE. For this reason, some PSFs deliberately organise delivery via a team of people (Broschak, 2015). Where there are strong affective bonds between KCEs and clients, this in turn leads to benefits for the firm, assuming the individual remains employed with them (Tellefsen and Thomas, 2005). Conversely, there are detrimental consequences for CPS suppliers where levels of affective antecedents (trust and affective commitment) on a KCE level are low or absent. Evidence obtained from the respondents during the qualitative phase of the analysis suggested that a lack of likeability and/or trust in the individual would have a damaging impact on the client's loyalty intentions. However, it was also found that the positive outcomes associated with KCE-centred antecedents have their limits. For example, it was determined that even if a client liked and/or trusted a KCE, this was insufficient for the supplier to achieve loyalty where the relationship with the firm was poor.

Evidence was found that locked-in commitment existed on both firm and KCE levels in this research. It was identified that clients perceived there are costs and risks associated with terminating relationships in situations where either individuals or firms collectively are difficult to replace. To an extent, this appears to be a result of the skill sets of the KCE. However, a recurring theme is CPS supplier firms becoming engrained in the project or process, leading to costs and risks being associated with switching. The skills of individual professionals are often decisive regarding the success of the outcome and the client relationship (Lowendahl,

2005). However, it was found that clients can perceive CPS supplier firms collectively to be difficult to replace, based on their collective knowledge. Furthermore, evidence was found for clients having perceived that there are costs and risks associated with dispensing with a CPS supplier due to non-recoverable resources being allocated to the relationship.

KCE-level loyalty antecedents present both an opportunity and a risk to firms. Whilst the contribution of individuals is important to clients, it may become indispensable in some situations. This may result in loyalty being targeted towards the KCE rather than the firm, with the attendant risk of losing business should that individual leave. Vafeas (2010) argued that, by creating multiple bonds between supplier and client organisations, this disperses client-specific knowledge widely throughout the supplier firm. Thus, the key knowledge critical to fulfilling the client's needs will no longer be the sole preserve of one individual who might leave the supplier firm at any time. By increasing the number of points of contact at the supplier firm, individual interpersonal relationships may become less important. Bendapudi and Leon (2002) stated that this should be handled with care, given that the impacts on trust, commitment, social bonds and knowledge could have the potential for negative outcomes from the implementation of the strategies. For example, attempts by management to reduce the reliance on a KCE can be perceived by clients as being unsettling and destructive.

9.5. Chapter conclusion

In this chapter, the results of the research have been discussed. Service quality, affective commitment and locked-in commitment were found to be significant predictors of client loyalty during the hypothesis testing. These findings generalised well from the qualitative phase of analysis when tested in the wider population, and they were consistent with evidence from the literature.

Furthermore, they were supported by the findings of the follow-up qualitative investigations undertaken to validate the results.

Value-based commitment was neither a strong nor significant predictor of loyalty in this research. Furthermore, a unidimensional construct for trust was not produced,hence it could not be included in the hypothesis testing stage. Evidence from the qualitative research and validation phases suggests that both value-based commitment and trust were important antecedents of CPS-client loyalty. Methodological explanations have been posited for these discrepant findings. The negative result for value-based commitment was a result of shared variance leading to a suppression effect during the multiple regression analysis. During the quantitative phase of research, trust had been operationalised in a manner consistent with the findings of the qualitative research findings. However, it was felt that attempting to capture all the different facets of trust was overly ambitious.

In Chapter 10, the conclusions of this research are set out. The limitations of the research, contribution to knowledge and recommendations for CPS suppliers are also put forward.

Chapter 10. Conclusions

10.1. Chapter introduction

The final chapter begins by revisiting the research questions and addressing the degree to which they have been answered. Following this, a summary is provided of the contribution this research has made to wider knowledge and its theoretical implications. The principal aim of this research was to provide practical guidance to the CPS industry. To this end, recommendations are provided for construction professionals regarding how they can build and benefit from client loyalty.

The process of undertaking this research involved years of continuous learning and development. With the benefit of hindsight, certain things would have been undertaken differently. Furthermore, no research is perfect or all-encompassing. Therefore, a statement of limitations is presented, as is a reflection on the research process. This research has unearthed several related questions that it is felt need addressing. Therefore, the chapter concludes with suggestions for future areas of research that would advance the understanding of CPS-client loyalty and construction supplier-client relationships.

10.2. Addressing the research questions

In this section, the research questions are restated, and the extent to which they have been addressed is considered. Revisiting the purpose of this research, no prior studies have investigated specifically what CPS suppliers can do via their service provision to ensure the repatronage and advocacy of their clients. Client loyalty is vital to the success (and, in financially challenging times, the survival) of CPS suppliers. Therefore, it was essential to undertake this research to tackle this gap in knowledge.

The key guiding question for this research was "*What are the key service-related antecedents of client loyalty to CPS suppliers*?"

This question was addressed by identifying, at the end of the research process, a set of key service-related antecedents. Compelling evidence was acquired during the qualitative research phase regarding the influence of service quality, affective commitment and locked-in commitment on CPS-client loyalty. These findings generalised to the wider population, given that all three were found to be significant predictors during the hypothesis testing. Furthermore, additional support was provided for these results during the follow-up validation assessment.

There are certain limitations regarding the extent to which the main research question was addressed. For example, evidence for the positive influence of trust on client loyalty was obtained during the qualitative research. However, issues encountered during the factor analysis meant it had to be excluded from the analysis and subsequent hypothesis testing. Clearly, trust is conceptually complex and requires more exploration to better conceptualise it in a CPS-supplier context. Additionally, despite evidence obtained from the qualitative phase of research with respect to value-based commitment being a client-loyalty antecedent, it was shown to be a weak and non-significant predictor during the hypothesis testing. However, this could not be demonstrated during the hypothesis testing, ostensibly for methodological reasons.

In summary, the research found compelling evidence that the key service-related antecedents of client loyalty are service quality, affective commitment and locked-in commitment. However, it is not claimed that this is an all-encompassing list. Plausibly, there are other factors (related to and external to the service provision) that could influence clients' decisions whether to retain and recommend CPS suppliers.

The second research question was "*Which of the key service-related antecedents most effectively predict client loyalty to CPS suppliers*?" To address this, a comparison of the influence of each of the predictors on client loyalty was necessary. This was achieved by examining the β values for each predictor obtained during the hypothesis testing.

Service quality was found to be the strongest predictor of CPS-client loyalty. The next strongest predictor of CPS-client loyalty was affective commitment, followed by locked-in commitment. These results demonstrated that both emotional and rational motivations positively influenced CPS-client loyalty in this study. Certain evidence suggests that, in the professional services sector, relational antecedents are the strongest predictors of client loyalty. For example, Cater and Cater (2009) found that affective commitment had a stronger influence on loyalty than any of the rational antecedents in their model. Cater and Cater (2010, p. 1331) concluded that the 'we like' emotion is stronger than that associated with 'we need' or 'we benefit from.'. Several studies from the wider business-to-business services sector also found affective commitment to be the strongest client-loyalty antecedent (e.g. Kumar, Hibbard and Stern, 1994; Wetzels, de Ruyter and van Birgelen, 1998; Gounaris, 2005). However, in this research, service quality (a rational antecedent) was a stronger predictor than affective commitment, the key relational antecedent.

The results of the hypothesis testing demonstrated that the antecedents that most strongly predict CPS-client loyalty conflict with the findings of certain other studies from different sectors. However, based on the findings of the qualitative research phase, this comes as no surprise. Clients stated that, whilst rapport and likeability were important, it was the core-service deliverables that mattered to them most. The quantitative research findings revealed this to be apparent within the wider population. These findings support certain other evidence from wider business-to-business studies, which suggests that personal relationships strengthen the

overall inter-organisational bonds, but are unlikely to compensate for poor levels of service quality in the longer term (Cater and Zabkar, 2009).

Whilst affective commitment was second to service quality in influence, it was shown to be a stronger predictor of CPS-client loyalty than locked-in commitment. This finding supports most of the articles reviewed, including those focusing on professional services (e.g. Cater and Zabkar, 2009; Cater and Cater, 2010) and wider business-to-business markets (e.g. Gounaris, 2005; Rauyruen and Miller, 2007). It also supports the argument of Broschak (2015, p. 14), who stated that a professional supplier's relationships with its clients are *"its key strategic assets."* Construction clients are adverse to being dependent on a single supplier (Gadde and Dubois, 2010). Additionally, locked-in commitment is not positively associated with the PWOM aspect of loyalty (Cater and Cater, 2010; Rauyruen and Miller, 2007). In situations where clients feel trapped in a relationship with a CPS supplier, they are unlikely to recommend that CPS supplier to others. Furthermore, clients who feel locked in are much more likely to switch suppliers when they can do so, compared to affectively committed clients (Fullerton, 2014). Whilst perceptions of constraint clearly play a part in clients retaining CPS suppliers, they appear to be relatively weak anchors. If the quality of the relationship and service is poor, construction clients are much more likely to terminate the services of the supplier when the situation of dependence ends (Jiang, Henneberg and Naude, 2011).

In summary, it appears that clients remain loyal to their CPS suppliers primarily as a result of receiving a high level of service quality. Whilst not as influential, affective commitment also plays a key role in CPS-client loyalty. Last in order of predictive strength, the perception of risk and cost (locked-in commitment) was shown to be an anchor preventing the dissolution of CPS supplier-client relationships.

10.3. Theoretical implications

Hair *et al.* (2014) recommended that researchers avoid myopically focusing merely on statistical significance and instead consider the theoretical significance of their findings. In this section, the findings of the research will be considered to determine the degree to which they support or conflict with existing theories.

Commitment is a central explanatory construct of supplier loyalty. However, there is no academic consensus regarding its conceptual structure. Some key studies on business-to-business service relationships have conceptualised it as a single construct (e.g. Morgan and Hunt, 1994). Conversely, more recently, scholars have conceptualised it as having multiple dimensions reflecting the different motivations for remaining in a relationship. This research has provided empirical support for a multidimensional model of commitment in a CPS supplier-client relationship context. It also aligns with studies from other professional service settings that have conceptualised commitment as having multiple dimensions (e.g. Cater and Zabkar, 2009).

Service quality in a CPS supplier-client context has been the subject of prior empirical enquiry. Most have used adapted versions of the SERVQUAL model originally developed by Parasuraman, Zeithaml and Berry (1985) (e.g. Hoxley, 1998; Prakash and Phadtare, 2018). This research adopted an alternative means of conceptualising service quality, using the model originally developed by Gronroos (1984), which conceptualises it as having technical and functional dimensions. This model of service quality has been validated in wider professional service settings and modified by the addition of communication quality (e.g. Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015), However, the results of this research have shown service quality to be a unidimensional construct in a CPS setting. This aligns with research that conceptualised service

quality as a unidimensional construct in wider business-to-business contexts (e.g. Rauyruen and Miller, 2007; Chenet, Dagger and O'Sullivan, 2010). From a theoretical perspective, this suggests that service attributes (such as timeliness, the advice provided and how it is communicated) are perceived by CPS clients as being different elements of the same core concept.

Loyalty has been conceptualised in a myriad of ways. It has been represented in the literature by PWOM (e.g. Chenet, Dagger and O'Sullivan, 2010), repatronage (e.g. Keh and Xie, 2009; Naumann *et al.*, 2010; Sarapaivanich and Patterson, 2015) or a combination of the two (e.g. Zeithaml, Berry and Parasuraman, 1996; Caseres and Paparoidamis, 2007; Cater and Cater, 2010). Whilst each of these aspects is important for CPS suppliers, there have recently been arguments in the loyalty literature that it should be conceptualised as a disaggregated construct. The rationale for this is that repatronage and PWOM are empirically distinct, serve different managerial purposes and should be considered separately (Watson *et al.*, 2015). The findings of several studies empirically support this assertion in other business-to-business contexts (e.g. Anaza and Rutherford, 2014). During this research, evidence was obtained suggesting that some clients may feel inhibited from offering referrals and recommendations to CPS suppliers to which they are otherwise demonstrating a high degree of repatronage loyalty. The reason for this (as inferred from the qualitative research phase and validation member checking) is that that they may be unwilling to risk their own reputation by recommending a supplier that may not perform to expectations. Alternatively, clients may have concerns about a dilution of service standards that they may receive should the supplier's workload increase as a result of their recommendation. However, during the qualitative research phase, most respondents suggested that they would advocate CPS suppliers that were worthy of repatronage. Furthermore, the factor analysis demonstrated that repatronage and PWOM form part of the same

unidimensional construct. The validation feedback provided additional evidence that most clients would recommend CPS suppliers to which they would also award future commissions. The findings of this research suggest that repatronage and PWOM are highly interrelated aspects of client loyalty. This supports the application of the fused loyalty construct developed by Zeithaml, Berry and Parasuraman (1996) and adapted frequently in other professional and wider business-to-business studies (e.g. Caceres and Paparoidamis, 2007; Cater and Cater, 2009; Cater and Zabkar, 2009).

An exploratory statistical analysis was carried out to help explain the findings of the hypothesis testing. The results demonstrated that affective commitment and service quality both remained consistently strong and were significantly influential on client loyalty, whatever combination of predictor variables were entered into the multiple regression equation. This supports the assertion that both rational and relational motivations are important drivers of client loyalty. First and foremost, the clients demonstrated a rational expectation for a high level of quality. In this respect, they require their CPS suppliers to deliver meticulous, timely and well-communicated services and advice, which will help them achieve their project goals. Secondly, clients prefer working with suppliers that they like and have a rapport with. Affective commitment and service quality were shown to independently increase client loyalty expressed via repatronage and PWOM intentions. This provides support for the buyer-seller framework originally developed by Dwyer, Schurr and Oh (1987), which posited that relational governance mechanisms can act in tandem with formal performance expectations in the maintenance of relationships between clients and suppliers. Both rational and relational rewards from the exchange preserved CPS relationships, which supports the principles of Social Exchange Theory (SET) (Thibaut and Kelly, 1959; Blau, 1964). SET has also been used to explain business-to-business client loyalty

in several other notable studies (e.g. Morgan and Hunt, 1992; Anaza and Rutherford, 2014).

10.4 Contribution to knowledge

Despite CPS being so important to the functioning of the construction industry and the wider economy, they have attracted comparatively little academic scrutiny. This research adds to the currently limited body of knowledge on CPS. Furthermore, most of the extant CPS studies have investigated intra-organisational topics. The few studies that have considered CPS supplier-client relationships have focused on aspects such as satisfaction as a means of demonstrating successful outcomes (Dainty, Cheng and Moore, 2003; Cheng, Proverbs and Oduoza, 2006). This study is the only known research that has investigated client loyalty empirically in a UK CPS context.

Whilst this research has addressed a construction-industry-related problem, the findings may be of use to researchers investigating other knowledge- and interaction-intensive services. With notable exceptions (e.g. Eriksson and Vaghult, 2000; Hong and Goo, 2004; Cater and Cater, 2009), there have been relatively few studies that have considered client loyalty in the professional service sector. Therefore, whilst there are limits to which the findings of this research can be generalised to other professional service sectors, they may be useful to scholars conducting research in this domain. In this respect, this research adds to the body of literature on loyalty in business-to-business professional services.

To inform the development of the conceptual model of the service-related antecedents of client loyalty, an analysis of CPS professional traits was undertaken. CPS have previously been examined in context with existing professional-trait models (Chan, Chan and Scott, 2007). However, one contribution made by this thesis is a theoretical CPS professional-trait model that

synthesises theories and evidence from several key studies. This may be useful for informing future construction management research that seeks to explain the attitudes and behaviour of CPS suppliers and their clients.

Bergman *et al. (*2006) argued that there is a tendency amongst researchers to rely on generic measures and constructs from the literature, rather than adapting them to the industry they are studying. The constructs used in this research were adapted to be specific to a CPS context, using the empirical findings of the initial phase of qualitative research. Most extant research examining commitment as a loyalty antecedent have focused primarily on its affective and calculative (locked-in) dimensions. Prior to this research, no known studies have simultaneously examined the impact of affective, locked-in, value-based and normative commitment on client loyalty in a business-to-business CPS context. Therefore, the constructs and measures developed during this process (particularly the three-component model of commitment) may be of use to other construction management researchers.

Most extant multilevel research on business-to-business loyalty has focused on the targets of loyalty (e.g. Palmatier, Scheer and Steenkamp, 2007; Anaza and Rutherford, 2014). However, this research adopted the less common approach taken by Rauyruen and Miller (2007) to examine the differential impact of the antecedents (firm versus KCE) on loyalty. Whilst this aspect was only explored during the initial qualitative phase of the research, insights were gained with respect to which service-related antecedents appear to act at both firm and KCE levels. Thus, this is the only known research that has examined the impact of multilevel antecedents on client loyalty in a CPS setting.

10.5. Recommendations for CPS suppliers

The aim of this research was to provide industry guidance that would be of practical benefit. In this section, the findings are distilled into recommendations aimed at helping CPS suppliers build and benefit from client loyalty.

It was found that client loyalty is influenced by both relational and rational drivers. Whilst personal relationships are important, CPS suppliers cannot hope to retain their clients and achieve their clients' advocacy unless they deliver a high level of service quality. First and foremost, clients are concerned with the fulfilment of their organisational objectives for their projects and assets. For this reason, CPS suppliers are advised to focus on helping clients achieve their project goals, and to deliver services in a meticulous and timely manner.

Second only to service quality in driving client loyalty are the relationships and rapport between clients and CPS suppliers. If there is a dilemma regarding what to focus on to achieve client loyalty, CPS suppliers are advised to concentrate predominantly on the core-service delivery. However, they should not underestimate the relational aspects of service delivery. CPS are interaction intensive, meaning there are opportunities to connect with clients on a personal level. Emotional attachment is what distinguishes genuine relationships from mere transactions. Whilst it appears that clients are primarily concerned with obtaining a high level of service to achieve organisational and project goals, they are also social beings. The degree of having a liking for and rapport with the CPS supplier on an individual and collective basis is therefore important. It is not unusual that a service relationship on the verge of breaking up is saved by the friendships between the individuals from both parties. Managers of CPS firms should be mindful of this when allocating or reallocating individuals to and from client accounts.

Whilst this research has demonstrated that personal relationships have a positive impact on loyalty, CPS suppliers can expect little sentimentality from their clients if their service levels fail repeatedly. It is possible that past performance may buy them a limited amount of time to improve if problems occur with delivery. However, to ensure they retain their clients as well as their clients' advocacy, they are advised to monitor and maintain all aspects of service quality. Failing to do so is likely to be the undoing of the relationship, given that CPS clients appear to be somewhat ruthless when dealing with poorly performing suppliers that fail to improve.

Generally, relationships between suppliers' employees and clients should be allowed to flourish. CPS have high human-asset specificity. The implication of this is that successful delivery often depends on the know-how of particular individuals. Client-supplier organisational bonds are often strengthened by friendships. Because interpersonal relationships often have stronger and more enduring effects than person-to-firm relationships, CPS firms should leverage interpersonal bonds whenever feasible. Managers should also be watchful for a clear lack of personal chemistry between their employees and their clients. In extreme cases, this may require reallocating individuals to other accounts, lest the overall service relationship be damaged.

Managers should also be mindful of the risk of personal loyalty growing to an extent that it jeopardises the CPS supplier firm's future relationship with the client. CPS are of a knowledge-intensive and low capital-intensive nature. This means that it is relatively easy for employees to coax clients away to another firm if they leave, whether that is to an existing competitor or their own start-up practice. CPS suppliers are advised to protect against this by including anti-solicitation covenants in their employment contracts. These are of use in restricting former employees from preying on a supplier's clients immediately after leaving the business.

A client's perceptions of the cost and risk associated with terminating a CPS relationship can prevent them leaving it. However, this should not be the supplier's focus. Constraint has a weaker and less enduring influence on loyalty than either service quality or affective commitment. Therefore, it is inadvisable for CPS suppliers to engineer situations calculatedly where clients feel trapped in the relationship. This is likely to breed resentment, and it means clients will be more likely to switch to a competitor when they have the opportunity.

Nevertheless, CPS suppliers are advised to organise their services and human capital in a way that makes them indispensable to their clients. It can be difficult for competitors to emulate detailed process or project knowledge. CPS suppliers may allocate resources and develop unique knowledge about a project or asset in a way that means the client would find them difficult to replace. In practice, this may mean avoiding employee rotation if it could have the effect of weakening the unique knowledge and experience required to deliver the service to the client's expectations.

Whilst most clients appear willing to recommend deserving CPS suppliers to others, they do not do so lightly. For this reason, endorsements from independent sources have high credence value above that of a firm's own marketing endeavours. For this reason, CPS suppliers should work actively at obtaining post-project feedback. Written endorsements can (with permission) be used to promote the firm on websites and publicity materials, supplementing the impact of referrals and recommendations arising during peer-to-peer client encounters.

The results have demonstrated that clients commonly used the same CPS supplier for more than one type of service. This suggests there is an appetite on the part of clients for multidisciplinary service offerings. CPS suppliers should consider leveraging their existing client base by cross-selling their services. The high degree of client interaction associated with CPS delivery may afford ample

opportunity to do so. However, it appears that some clients prefer specialists in one domain, due to concerns about the dilution of service quality. Furthermore, CPS suppliers should be mindful of their own competencies and coordination abilities within their own firms when offering such service packages. Cross-selling should only be attempted where CPS firms have the capability to deliver a high level of service across all proffered activity streams, which is to avoid failing during delivery and undermining the client relationship.

Suppliers that simply track clients' loyalty to the firm lack important diagnostic data about the nature and basis of their allegiance. The senior management of CPS firms may have the intuition that excessive employee-based client loyalty is problematic. However, they may have no grasp of what portion of the supplier loyalty is 'owned' by an individual employee or what the financial impact would be if that employee defected to a competitor. Failure to acknowledge the extent to which loyalty to the firm is vested in employees can lead to the underestimation of risk. Therefore, it is advised that client-monitoring measures be designed subtly to account for the degree of loyalty targeted towards employees working on the account and the supplier firm collectively.

Most CPS clients sampled during this research were highly experienced. Furthermore, evidence from the qualitative phase of the research has suggested that most were confident in their ability to appraise service quality. However, it is likely that CPS suppliers may, at some point, encounter clients with limited experience and technical knowledge. In such a situation, the client may rely heavily on the supplier's ability to communicate effectively as a quality-appraisal mechanism. CPS suppliers are advised to place interpersonal communication skills as one of the main criteria when deploying individual professionals to these accounts. Care should be taken to ensure that technical information is explained in a meaningful way. Additionally, CPS suppliers are also advised to focus on

offering suggestions (including explaining the advantages and disadvantages of each) and provide updates on delivery timescales.

This research has identified certain key antecedents of CPS supplier-client loyalty. However, there is unlikely to be a simple 'recipe' for loyalty that is applicable to all scenarios. Some clients may be highly rational, focusing only on the CPS-related outputs. Contrastingly, other clients may be driven away by a lack of likeability and rapport. Therefore, CPS suppliers are advised to analyse their clients' specific needs carefully, in order to identify and deliver the specific antecedent mix likely to result in their loyalty.

In summary, the findings of this research have identified a pattern of desirable strategic behaviour that can help CPS suppliers to build and benefit from client loyalty. First and foremost, the focus should be on the core deliverables. CPS suppliers are advised to put service quality at the top of their priorities, delivering and communicating exactly what the client wants in accordance with agreed timescales. Additionally, effort should be made to ensure there are good working relationships between employees and client representatives. Managers of CPS suppliers should deal with any personal clashes between their employees and clients, and this should be done by mediation, training or redeployment, as necessary. In time, the relationship may be strengthened further as the supplier becomes engrained in the project or the client's processes. However, given that construction clients have an aversion to being dependent on sole suppliers, it is advised that suppliers do not emphasise this aspect.

10.6. Reflections on the research

During the research process, several choices were made regarding the methodology and the analysis of data, all of which consequently impacted upon the findings. For example, using the word 'what' in the first research question

meant that a qualitative approach was most appropriate. The second research question asked 'which' of the service-related antecedents most strongly predicted client loyalty, necessitating a follow-up quantitative phase of research. Therefore, the research questions could only be addressed properly using a mixed methods research design. Undertaking such research proved challenging and time-consuming. However, it allowed the exploration of the problem without prematurely imposing a rigid framework upon it. Additionally, it has resulted in the researcher developing a more rounded set of research skills.

On reflection, the initial use of CFA during the quantitative data analysis was premature. This supports the views of certain scholars who stated that it is only appropriate for use after the underlying factor structure has been established using methods such as EFA (e.g. Brown, 2006; Cater and Cater, 2009; Lowry and Gaskin, 2014). Scales established using EFA are often subject to follow-up confirmatory analysis using CFA (e.g. Cater and Cater, 2010). However, the findings of PCA do not generalise well to CFA, given that they are not based on the same factor model (Brown, 2006). Furthermore, it is considered poor practice to analyse the same data using both EFA and CFA. Where both methods of factor analysis are undertaken in the same study, some researchers have split the sample, using one part for EFA and the other for the follow-up CFA (e.g. Cabrera-Nguyen, 2010; Keiningham *et al.*, 2015; Fokkema and Greiff, 2017). A respectable survey response rate was achieved during the research, justifying the expense incurred in obtaining candidate respondents using commercial databases. However, the sample size was only just large enough to undertake one phase of factor analysis. EFA was employed to identify the factors used to develop the summated scales used during hypothesis testing. To achieve a large enough sample to undertake both methods of factor analysis would have required at least double the number of responses returned. This was beyond the available

resources and time, given the difficulty and cost associated with accessing the population.

Multiple regression analysis was used as the main means of testing the hypotheses during the quantitative phase of the research. An alternative method considered was structural equation modelling (SEM). The advantage of SEM over traditional statistical methods is that it accounts for measurement-error effects and allows the testing of a series of linear causal relationships with more than one outcome variable simultaneously (Brown, 2006). However, the results of the factor analysis showed loyalty to be a unidimensional construct. Therefore, multiple regression analysis was deemed appropriate for hypothesis testing, as it is suitable for the testing of multiple predictors against a single outcome variable. Furthermore, multiple regression analysis is a robust technique for sample sizes ≥100 cases (Trasorras, Weinstein and Abratt, 2009; Field, 2018). The method adopted in this research of using summated scales mitigates against measurement error when using multiple regression analysis (Hair *et al.*, 2014). Additionally, whilst not universally agreed on, SEM is arguably best suited to studies with very large sample sizes, typically >200 cases (Sharma, Young and Wilkinson, 2015), which is well above that obtained during this research.

10.7. Limitations of the research

Steps were taken to maximise the reliability and validity of the claims made in this research. Chapter 5 describes the methodology adopted to ensure the research was conducted in accordance with robust academic practice. The empirical investigation involved both qualitative and quantitative phases to address the research questions. An additional follow-up phase of qualitative investigation was carried out to validate the results of the hypothesis testing. Despite these

measures, certain limitations should be considered when interpreting the results and conclusions.

Firstly, this research involved the operationalisation of theoretical concepts during the quantitative phase of analysis. The indicators used to represent them were selected based on the theory and the empirical support obtained during this research. However, it is unlikely that any such indicators can capture complex social phenomena without at least some error (Nardi, 2006).

The findings of surveys cannot be generalised beyond the population sampled with any degree of validity (Fellows and Liu, 2015). Therefore, there are limitations to the degree to which the findings of this research can be applied beyond the UK Midlands. Reasons for caution include the potential differences in client cultures across UK regions. These include industry competitiveness, as well cultural factors, such as individuals' willingness to trust and sociability (Cooke, Clifton and Oleaga, 2005). Additional research replicating this study in different geographical regions of the UK and internationally is necessary to assess the generalisability of the findings outside the population sampled.

During the quantitative phase of research, efforts were made to warrant that the survey was representative of the range of supplier-client relationship durations. Respondents were instructed to focus on the CPS supplier used on their most recently completed project or commissioned service. However, the descriptive statistics demonstrated that the sample was dominated by clients who had used the same CPS supplier for several years. Therefore, the results may be biased in that they apply primarily to successful supply relationships. Nevertheless, the sample included cases representing different stages of the relationship's lifecycle. Therefore, there is sufficient data variability to avoid invalidating the findings.

This research considered client loyalty to CPS suppliers studied as a homogenous group. Due to time and resource limitations, it was not feasible to extend the scope

of the research to examine differences in the client-loyalty antecedent pattern between different sub-professions. To do so would have required a far larger survey sample to enable statistically valid inferences from the data.

An acceptable response rate was achieved in the main survey. The number of responses received exceeded the minimum requirements for EFA (Field, 2018). However, the optimum is five cases for every item, which was not always met. Additionally, due to the limited number of cases and the lack of generalisability from PCA, it was not possible to undertake CFA on the data as a means of providing additional support for scale validity. Hair *et al.* (2014) suggested that researchers can determine discriminant and convergent validity by correlating the results from repeated measurements using similar scales. Nevertheless, undertaking this additional work was outside the available research budget and timescale. Therefore, caution should be applied when considering the generalisability of the factor structure to the wider CPS-client population.

Vafeas (2010) found that clients have better relationships with smaller professional suppliers compared to larger firms. This is explained by the suggestion that smaller firms have a clearer common purpose and find it easier to establish networks of interpersonal bonds with the client organisation. Whilst demographic information was captured on the clients during the survey, no comparable data were obtained for the CPS supplier. Therefore, the moderating influence of firm size on the service-related loyalty antecedents could not be examined during this research.

A cross-sectional survey design was selected as an expedient means of establishing associations between variables. However, data gathered using this method is effectively a snapshot at a point in time. For practical and ethical reasons, it was not possible to manipulate the variables in question. Therefore, the methodology adopted was limited with respect to proof of causation. Therefore,

when time and resources allow, a longitudinal study that tracks client loyalty over time would be useful for validating research findings.

The survey was limited to gathering data on client perceptions and attitudes towards CPS suppliers, with no account for client heterogeneity. Clients vary in how receptive they are to forming relational bonds (Bendapudi and Berry, 1997). Furthermore, the degree to which clients are willing to trust a supplier varies along a continuum, with some being more trusting than others (Manu *et al.*, 2015). In the same manner, clients have different "*attachment styles*" (i.e. the degree to which they feel and express loyalty independently to a supplier's service offering) (Keiningham *et al.*, 2015).

The boundaries of this research were explained in Chapter 1, stating that it applies only to the service-related antecedents of client loyalty. It does not claim to provide a complete answer to the question of what influences CPS-client loyalty, nor does it claim to identify a simple client-loyalty recipe. Contextual factors also affect supplier-client relationships. These include client heterogeneity, competitive intensity, client organisational change and market turbulence (Bendapudi and Berry, 1997; Heirati *et al.*, 2019). Furthermore, clients and their requirements are likely to be context specific. The broad generalisations made on the back of the findings of this research are unlikely to reflect every CPS supplier-client relationship perfectly. Whilst it is intended that the recommendations made in this research will help CPS suppliers identify what they can do build and benefit from loyalty, there is no substitute for them analysing the individual needs of their own clients.

10.8. Proposed areas of future research

Whilst questions regarding the key antecedents of CPS-client loyalty have been addressed, this thesis is a starting point. There are several additional questions that remain unaddressed.

Researchers of client loyalty should be cognisant of its dynamic nature (Curran *et al.*, 2010). Two seminal works on service loyalty (Dick and Basu, 1994; Oliver, 1999) proposed that it develops through a succession of stages. Therefore, it is unlikely that the impact of service-related loyalty antecedents is consistent across CPS supplier-client relationships of different durations. This research addressed the issue of which service-related antecedents most strongly predict CPS-client loyalty. However, advancing this line of enquiry, a question yet to be addressed is 'Which antecedents have most influence on CPS-client loyalty over the long term?' Such a question is beyond the scope of this research. However, it would be interesting to compare the influence of different antecedents across the different phases of the service relationship, from initiation to dissolution.

The mechanisms through which antecedents influence client loyalty may be more nuanced than the simple direct effect of service-related antecedents. There may be mediation and moderation effects that have not yet been identified. For example, the positive association between trust and client loyalty has been demonstrated in other professional business-to-business services studies (e.g. Slapnicar, Groff and Stumberger, 2015). However, other evidence suggests that the impact of trust on loyalty is mediated by commitment (e.g. Morgan and Hunt, 1994; Cater and Cater, 2009; Cater and Zabkar, 2009; Chang *et al.*, 2012). Whilst multiple regression analysis, discriminant analysis and Multivariate Analysis of Variance (MANOVA) (which allow for multiple dependent variables) are powerful tools, they can only consider single relationships between predictors and outcome

variables. SEM can simultaneously examine a series of dependence relationships (chains of variables) with more than one outcome variable (Hair *et al.*, 2014). Future research that explores the interrelationships between service-related antecedents and moderation/mediation effects, as well as their direct impact on CPS-client loyalty, would advance this line of enquiry.

The concept of CPS appears to be accepted in academic circles. However, the CIC's (2008) definition and list of sub-professions used in this research was industry-defined rather than proven empirically. The literature analysis and subsequent findings of the qualitative research suggest that (excepting specific deliverables) clients of different CPS sub-professions want broadly similar things. Given that this research considered CPS as a homogenous collective, the indicator items reflecting the predictor variables were not specific to the component sub-professions. This reason was posited for the lack of delineation between the functional and technical quality aspects during the factor analysis. Future research examining the Gronroos (1984) model of service quality in the CPS population would be valuable for comparing the impact of different quality aspects on desirable outcomes. It is recommended that such studies focus on only one sub-profession to facilitate the technical quality scale being developed specifically for the sub-profession service delivered.

Signalling theory has been used to explain how functional quality can serve as a proxy for technical quality in other professional service industries (Sharma and Patterson, 1999; Sarapaivanich and Patterson, 2015). This is an artefact of information asymmetry between clients and suppliers during the delivery of complex intangible services. However, the aims of this research did not extend to examining the extent to which signalling theory explains CPS clients' perception of service quality. Furthermore, the demographic data have demonstrated that most clients included in both the qualitative and quantitative phases of this research

were highly experienced. Therefore, the population sampled in this research was ill-suited to the study of signalling theory. Future research that targets a less-experienced client population to investigate signalling theory in a CPS context would contribute to the wider professional-service-industry literature.

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The research questions adopted in this research were designed in a positive manner, to investigate the reasons why clients remain loyal to CPS suppliers. An alternative way of looking at the same research problem is asking the question 'Why do CPS clients terminate supply relationships?' Several scholars have investigated client loyalty in this manner (e.g. Naumann *et al.*, 2010; Williams *et al.*, 2011; Bermiss and Greenbaum, 2016). Such an approach may add some richness to addressing the problem or even unearth unforeseen results.

The focus of the quantitative research phase was on CPS clients, given that it is normally (but not always) the client who decides if a supply relationship should continue or be terminated. Experienced CPS practitioners were included in the sample during the initial qualitative research phase, given the rich insights that they were capable of providing. However, out of necessity, the population sampled during the follow-up quantitative phase of research only included CPS clients.

There is an opportunity for future research to paint a more complete picture by undertaking a similar survey but sampling the CPS-supplier population this time.

Whilst this research has resulted in several valuable insights, questions relating to the impact of trust on CPS-client loyalty remain unresolved. Firstly, research is necessary to explore fully the most appropriate means of operationalising trust in a CPS setting. Ideally, this would take the form of an initial qualitative exploration focusing on trust, followed up by a quantitative survey to develop a valid trust construct.

Many of the key findings from the initial qualitative phase of this research generalised well to the follow-up quantitative findings. For example, affective commitment, service quality and locked-in commitment were all significant predictors of loyalty. However, in contrast, despite being shown to be an antecedent of CPS-client loyalty during the qualitative phase of the research, the hypothesis testing revealed value-based commitment to be a weak and non-significant predictor. DiLoreto and Gaines (2016) argued that discrepant results obtained during mixed methods research should be treated as an opportunity and a catalyst for further research. Given the complexity of value as a concept and its close association with other antecedents, such as service quality, it clearly requires further empirical exploration in a CPS supply-relationship context.

Due to limitations on the number of cases that could feasibly be obtained, the multi-level aspect of the loyalty antecedents was not examined quantitatively. The results of the qualitative analysis suggested that trust, affective commitment and locked-in commitment are distinct with respect to having separate firm and KCE levels. Ideally, this would have been tested quantitatively, using factor analysis to determine if the firm and KCE levels are unidimensional and distinct from each other. It is recommended that researchers following this line of enquiry only consider a single or limited number of duel-level antecedents, at least initially.

However, if multiple antecedents are considered in the same study, a very large sample size is needed, due to the number of items that are probably necessary in the survey instrument and potential problems with multicollinearity.

10.9. Final conclusions

Whilst there remains more to learn about CPS-client loyalty, this thesis represents an important start to this line of enquiry. Rich insights were gained during the qualitative exploration, during which the key service-related antecedents of client loyalty were identified. Several key findings from this phase of research were validated by demonstrating that they generalised to the wider CPS-client population.

First and foremost, this research was aimed at helping CPS suppliers. Having several decades' experience in the industry, it is this researcher's passionate belief that client loyalty is of ultimate importance to the success (and, in financially difficult times, the survival) of CPS firms. The findings of this research also will be of practical benefit to those CPS suppliers that aspire to grow and diversify. A loyal client base is a perfect platform for doing so. Expansion into new territories and markets are likely to lead to greater revenues and an enhanced reputation. However, growth may not be appropriate or desirable for all, given its attendant problems and risks. CPS are arguably less easily scaled up compared to other construction services. The most valuable aspects of what construction professionals deliver are complex, context specific and hard to codify. Gaining that kind of knowledge requires long, arduous investments in people, and a willingness amongst senior professionals to mentor juniors. Furthermore, given that growth is inevitably accompanied by a more bureaucratic organisational structure, CPS firms risk losing key elements of what made them successful in the first place. Therefore, rather than aiming to be large and multidisciplinary, some CPS

suppliers may be satisfied in remaining as a ‘boutique’ supplier specialising in its core competence. Evidence obtained from this research suggests that there is a market for both business models. Ultimately, it is up to the CPS supplier firm to decide which of these strategies are most appropriate.

Whilst construction professionals must work hard to achieve their status and prosperity, they are afforded a prominent and respected place in the construction industry and society in general. With such rewards comes responsibility. As Shell and Sobel (2000, p. 11) stated “*act like a true professional, aiming for true excellence and the money will follow.”*

In summary, to achieve success, CPS suppliers are advised to dedicate themselves first and foremost to delivering their clients’ needs, whilst maintaining strong relationships with them.

References

Abdul-Rahman, H. (1996) Some observations on the management of quality among construction professionals in the UK. *Construction Management & Economics.* **14**(6), pp. 485-495.

Abowitz, D.A. and Toole, T.M. (2010) Mixed method research: fundamental issues of design, validity, and reliability in construction research. *Journal of Construction Engineering and Management.* **136**(1), pp. 108-116.

Acocella, I. (2012) The focus groups in social research: advantages and disadvantages. *Quality & Quantity; International Journal of Methodology.* **46**(4), pp. 1125-1136.

Adeyinka, B.F., Jagboro, G.O., Ojo, G.K. and Odediran, S.J. (2014) An assessment of construction professionals' level of compliance to ethical standards in the Nigerian construction industry. *Journal of Construction Project Management and Innovation.* **4**(1), pp. 863-881.

Ahmed, S.M. and Kangari, R. (1995) Analysis of client-satisfaction factors in the construction industry. *Journal of Management in Engineering.* **11**(2), pp. 36-44.

Ahmed, V, and Opoku, A. (2016). Getting ready for your research. *in* Ahmed, V, Opoku, A, and Aziz, Z (eds.) *Research Methodology in the built environment a selection of case studies*. London: Routledge. pp. 22-30.

Ajzen, I. (1991) The theory of planned behaviour. *Organizational behaviour and human decision processes.* **50**(2), pp. 179-211.

Ajzen, I. and Fishbein, M. (1980) *Understanding attitudes and predicting social behaviour.* Englewood Cliffs: Prentice-Hall.

Akiner, I. and Tijhuis, W. (2007) Work goal orientation of construction professionals in Turkey: comparison of architects and civil engineers. *Construction Management and Economics.* **25**(11), pp. 1165-1173.

Akinrata, E.B. (2019) Evaluating the level of unethical behaviour by quantity surveyors in the Nigerian construction industry. *International Journal of Management & Entrepreneurship Research.* **1**(5), pp.214-131.

Akinsiku, E.O. (2016) Assessment of quantity surveyors' service quality. *Covenant Journal of Research in the Built Environment.* **2**(1), pp. 17-30.

Aliakbarlou, S., Wilkinson, S. and Costello, S.B. (2017) Exploring construction client values and qualities: Are these two distinct concepts in construction studies? *Built Environment Project and Asset Management.* **7**(3), pp. 234-252.

Allen, N.J. and Meyer, J.P. (1990) The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology.* **63**(1), pp. 1-18.

Alvesson, M., Karreman, D., Sturdy, A. and Handley, K. (2009) Unpacking the client(s): Constructions, positions and client–consultant dynamics. *Scandinavian Journal of Management.* **25**(3), pp. 253-263.

Amaratunga, D., Baldry, D., Sarshar, M. and Newton, R. (2002) Quantitative and qualitative research in the built environment: application of “mixed” research approach. *Work Study.* **51**(1), pp. 17-31.

Amonini, C., McColl-Kennedy, J.R., Soutar, G.N. and Sweeney, J.C. (2010) How professional service firms compete in the market: an exploratory study. *Journal of Marketing Management.* **26**(1-2), pp. 28-55.

Anaza, N.A. and Rutherford, B. (2014) Increasing business-to-business buyer word-of-mouth and share-of-purchase. *Journal of Business & Industrial Marketing.* **29**(5), pp. 427-437.

Anderson, E. and Weitz, B. (1989) Determinants of continuity in conventional industrial channel dyads. *Marketing Science.* **8**(4), pp. 310-323.

Anderson, J.C. and Narus, J.A. (1990) A Model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing.* **54**(1), pp. 42-58.

Anderson, E. and Weitz, B. (1992) The use of pledges to build and sustain commitment in distribution channels. Journal of Marketing Research [online], 29(1), pp. 18-34.

Arndt, J. (1967) Role of product-related conversations in the diffusion of a new product. *Journal of Marketing Research.* **4**(3), pp. 291-295.

Arndt, J. (1979) Toward a Concept of Domesticated Markets. *Journal of Marketing.* **43**(4), pp. 69-75.

Aydin, S. and Ozer, G. (2005) The analysis of antecedents of customer loyalty in the Turkish mobile telecommunication market. *European Journal of Marketing.* **39**(7/8), pp. 910-925.

Bagdoniene, L. and Jakstaite, R. (2009) Trust as a basis for development of relationships between professional service providers and their clients. *Economics and Management.* **14**, pp. 360-366.

Bagozzi, R.P. (1978) Marketing as exchange: A theory of transaction in the marketplace. *The Journal of Marketing.* **21**(4) pp. 535-585.

Baker, J. and Lamb, J., Charles W (1994) Measuring architectural design service quality. *Journal of Professional Services Marketing.* **10**(1), pp. 89-106.

Bandalos, D.L. (2018) *Measurement theory and applications for the social sciences.* London: Guilford Publications.

Bardauskaite, I. (2014) Loyalty in the business-to-business service context: a literature review and proposed framework. *Journal of Relationship Marketing.* **13**(1), pp. 28-69.

Becker, H.S. (1960) Notes on the concept of commitment. *American Journal of Sociology.* **66**(1), pp. 32-40.

Becker, T. C., Jaselskis, E. J. and McDermott, C.P. (2011) Implications of construction industry trends on the educational requirements for future construction professionals. *Associated Schools of Construction 2011 International Conference.* April 6-9, 2011. Omaha, University of Nebraska-Lincoln, Omaha, NE: ASC. pp. 1-12.

Belonax, J.J., Newell, S.J. and Plank, R.E. (2007) The role of purchase importance on buyer perceptions of the trust and expertise components of supplier

and salesperson credibility in business-to-business relationships. *The Journal of Personal Selling and Sales Management.* **27**(3), pp. 247-258.

Bendapudi, N. and Berry, L.L. (1997) Customers' motivations for maintaining relationships with service providers. *Journal of Retailing*. **73**(1), pp. 15-37.

Bendapudi, N. and Leone, R.P. (2002) Managing business-to-business customer relationships following key contact employee turnover in a vendor firm. *Journal of Marketing.* **66**(2), pp. 83-101.

Bennett, R., Hartel, C.E.J. and McColl-Kennedy, J.R. (2005) Experience as a moderator of involvement and satisfaction on brand loyalty in a business-to-business setting. *Industrial Marketing Management.* **34**(1), pp. 97-107.

Berg, B.B., Thuesen, C., Ernstsen., S.K. and Jensen, P.A. (2019) Constructing archetypes: mapping business models in the construction value chain. *ARCOM 2019 Conference.* 2-4 September 2019. Leeds, UK: Association of Researchers in Construction Management. pp. 398-406.

Bergman, M.E., Dick, R.V., Becker, T.E. and Meyer, J.P. (2006) The relationship between affective and normative commitment: review and research agenda. *Journal of Organizational Behavior.* ***27***(5), pp. 645-663.

Berman, E.A. (2017) An exploratory sequential mixed methods approach to understanding researchers' data management practices at UVM: Integrated findings to develop research data services. *Journal of eScience Librarianship.* **6**(1). pp.1104-1129.

Bermiss, Y.S. and Greenbaum, B.E. (2016) Loyal to whom? the effect of relational embeddedness and managers' mobility on market tie dissolution. *Administrative Science Quarterly.* **61**(2), pp. 254-290.

Berry, L.L. (1983). Relationship marketing. *in* L.L. Berry, G.L., Shostack, G.D. Upah (eds.) *Emerging perspectives on services marketing.* Michigan US. American Marketing Association. pp.25-28.

Berry, L.L. and Parasuraman, A. (2004). *Marketing services: Competing through Quality.* Oxford: Simon and Schuster.

Black, C., Akintoye, A. and Fitzgerald, E. (2000) An analysis of success factors and benefits of partnering in construction. *International Journal of Project Management.* **18**(6), pp. 423-434.

Blanchflower, D.G. and Shadforth, C. (2007) *Entrepreneurship in the UK.* Boston: Now Publishers Inc.

Blau, J.R. (1987). *Architects and firms: a sociological perspective on architectural practice.* Massachusetts: MIT.

Blau, P.M. (1964) Justice in Social Exchange. *Sociological Inquiry*. **34**(2), pp. 193-206.

Blau. P. M. (1968). Interaction: Social Exchange*. International Encyclopaedia of the Social Sciences.* **7**, pp. 452-458.

Bloemer, J. and Odekerken-Schroder, G. (2007) The psychological antecedents of enduring customer relationships: an empirical study in a bank setting. *Journal of Relationship Marketing* **6**(1), pp. 21-43.

Bofah, E.A. and Hannula, M.S. (2015) Studying the factorial structure of Ghanaian twelfth-grade students' views on mathematics. Springer International Publishing *Advances in Mathematics Education.* **1,** pp. 335-381.

Bolton, R.N., Smith, A.K. and Wagner, J. (2003) Striking the right balance: designing service to enhance business-to-business relationships. *Journal of Service Research.* **5**(4), pp. 271-291.

Bove, L.L. and Johnson, L.W. (2006) Customer loyalty to one service worker: Should it be discouraged? *International Journal of Research in Marketing.* **23**(1), pp. 79-91.

Bowen, P., Akintoye, A., Pearl, R. and Edwards, P.J. (2007) Ethical behaviour in the South African construction industry. *Construction Management and Economics***. 25**(6), pp. 631-648.

Bowen, P. Cattell, K., Edwards, P., and Lingard, H. (2014) Predictive modelling of workplace stress among construction professionals. *Journal of Construction Engineering and Management.* **140**(3), pp. 1-10.

Bowen, P., Edwards, P. and Lingard, H. (2013) Workplace stress among construction professionals in South Africa: The role of harassment and discrimination. *Engineering, Construction and Architectural Management.* **20**(6), pp. 620-635.

Bowen, P., Edwards, P., Lingard, H. and Cattell, K. (2014) Occupational stress and job demand, control and support factors among construction project consultants. *International Journal of Project Management*. **32**(7), pp. 1273-1284.

Boyd, D. and Chinyio, E. (2006) *Understanding Construction Clients.* Oxford: Blackwell Science.

Boynton, P.M. and Greenhalgh, T. (2004) Guide to questionnaire research: Selecting, designing, and developing your questionnaire. *British Medical Journal.* **328**(7451), pp. 1312-1315.

Bragg, M., Grayling, A.C., Baggini, J. Fricker, M. (2005). *Pragmatism. In our time: Philosophy.* BBC. [online]. [accessed 21st March 2018]. Available at: <https://www. bbc.co.uk/programmes/p003k9f5/broadcasts>

Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology.* **3**(2), pp. 77-101.

Braun, V. and Clarke, V. (2013) *Successful qualitative research: a practical guide for beginners.* Los Angeles, California: Sage Publications Ltd.

Breidbach, C.F., Smith, P. and Callagher, L.J. (2013) Advancing innovation in professional service firms: Insights from the service-dominant logic. *Service Science.* **5**(3), pp. 263-275.

Briggs, E. and Grisaffe, D. (2010) Service performance—loyalty intentions link in a business-to-business context: the role of relational exchange outcomes and customer characteristics. *Journal of Service Research.* **13**(1), pp. 37-51.

Brinkmann, S. and Kvale, S. (2015) *Interviews: learning the craft of qualitative research interviewing.* 3rd ed. Los Angeles: Sage Publications Ltd.

British Medical Association (2017). *Doctors' titles: explained*. [online]. [accessed 21st February 2020]. Available at:
<file:///C:/Users/nwilliams/Downloads/PLG-doctors-titles -explained.pdf>
Broad, R.M. (2012). *Networking Performance: A study of the benefits of business networking in the West Midlands.* PhD thesis. University of Wolverhampton.

Brochner, J. (2016). The changing nature of the built environment: An economic perspective. *in* Ruddock, L. (eds.) *Economics of the modern built environment*. London. Routledge. Pp. 11-33.

Brock, D.M., Leblebici, H. and Muzio, D. (2013) Understanding professionals and their workplaces: The mission of the Journal of Professions and Organization. *Journal of Professions and Organization.* **1**(1). pp. 1–15.

Broschak, J. and Block, E. (2014) With or without you: when does managerial exit matter for the dissolution of dyadic market ties? *Academy of Management Journal*. **57**(3), pp. 743.

Broschak. J. P, (2015). Client relationships in professional services. *in* Empson, L., Muzio, D. and Broschak, J. (eds.) *The Oxford Handbook of Professional Service Firms*. Oxford: Oxford University Press. pp. 304-326.

Brown, S., McHardy, J., McNabb, R. and Taylor, K. (2011) Workplace performance, worker commitment, and loyalty. *Journal of Economics & Management Strategy***, 20**(3), pp. 925-955.

Brown, T.A. (2006) *Confirmatory Factor Analysis for Applied Research*. New York: Guilford Press.

Bryman, A. (2016) *Social Research Methods.* 5th ed. Oxford: Oxford University Press.

Bryman, A. and Bell, E. (2015) *Business Research Methods.* 4th ed. Oxford: Oxford University Press.

Bucknall, D. (2014). *Underpinning team performance*. [online]. [accessed 16th October 2017]. Available at:
<https://www.ricsrecruit.com/article/underpinning-team- performance/>
Bullinger, B. and Treisch, C. (2015) Herding cats - Future professionals' expectations of attractive employers. *Zeitschrift für Personalforschung.* **29**(2), pp. 149-177.

Building (2017). *Top 150 consultants 2017.* [online]. [accessed 22nd June 2019]. Available at: <https://www.building.co.uk/data/top-150-consultants-2017/5089771. article>

Buttle, F.A. (1998) Word of mouth: understanding and managing referral marketing. *Journal of Strategic Marketing.* **6**(3), pp. 241-254.

Byrne, B.M. (2010) *Structural Equation Modelling with AMOS: Basic Concepts, Applications, and Programming.* 2nd ed. Hove: Routledge.

Cabrera-Nguyen, P. (2010) Author guidelines for reporting scale development and validation results in the journal of the society for social work and research. *Journal of the Society for Social Work and Research***, 1**(2), pp. 99-103.

Caceres, C.R. and Paparoidamis, N.G. (2007) Service quality, relationship satisfaction, trust, commitment and business-to-business loyalty. *European Journal of Marketing,* **41**(7/8), pp. 836-867.

Cahill, D.L., Goldsby, T.J., Knemeyer, A.M. and Wallenburg, C.M. (2010) Customer loyalty in logistics outsourcing relationships: an examination of the moderating effects of conflict frequency. *Journal of Business Logistics.* **31**(2), pp. 253-277.

Campbell, A.J. and Verbeke, A. (1994) *The globalization of service multinationals*. Long Range Planning, **27**(2). pp. 95-102.

Carifio, J. and Perla, R. (2008) Resolving the 50-year debate around using and misusing Likert scales. *Medical Education.* **42**(12), pp. 1150-1152.

Carr, P.G., de la Garza, Jesus M. and Vorster, M.C. (2002) Relationship between personality traits and performance for engineering and architectural professionals providing design services. *Journal of Management in Engineering.* **18**(4), pp. 158-166.

Carr, P.G., Garza, D.L. and Vorster, M.C. (2002) Relationship between personality traits and performance for engineering and architectural professionals providing design services. *Journal of Management in Engineering.* **18**(4), pp. 158-166.

Casidy, R. and Nyadzayo, M. (2017) Drivers and outcomes of relationship quality with professional service firms: An SME owner-manager perspective. *Industrial Marketing Management.* **78**, pp. 27-42.

Cater, B. and Cater, T. (2009) Emotional and rational motivations for customer loyalty in business-to-business professional services. *The Service Industries Journal.* **29**(8), pp. 1151-1169.

Cater, B. and Zabkar, V. (2009) Antecedents and consequences of commitment in marketing research services: The client's perspective. *Industrial Marketing Management***. 38**(7), pp. 785-797.

Cater, T. and Cater, B. (2010) Product and relationship quality influence on customer commitment and loyalty in B2B manufacturing relationships. *Industrial Marketing Management.* **39**(8), pp. 1321-1333.

Cabinet Office (2018). New changes to encourage small businesses to apply for government contracts. [online]. [accessed 6th July, 2020]. Available at: <https://www.gov.uk/government/news/new-changes-to-encourage-small-businesses-to-apply-for-government-contracts>

Challender, J., Farrell, P. and McDermott, P. (2019) *Building Collaborative Trust in Construction Procurement Strategies.* Chichester: John Wiley & Sons.

Chan, A.T., Chan, E.H. and Scott, D. (2007) Evaluation of Hall's professionalism scale for professionals in the construction industry. *Psychological Reports.* **100**(3), pp. 1201-1217.

Chan, A.T.S., Chan, E.H.W., Scott, D. and Chan, M.W. (2002) Educating the 21st century construction professionals. *Journal of Professional Issues in Engineering Education and Practice***, 128**(1), pp. 44-51.

Chan, I., Leung, M. and Yuan, T. (2014) Structural relationships between cultural values and coping behaviours of professionals in the stressful construction industry. *Engineering, Construction and Architectural Management***. 21**(2), pp. 133-151.

Chan, M., Lau, L., Lui, T., Ng, S., Tam, E. and Tong, E. (2001) *Final report: customer relationship management. customer relationship management consortium study.* [online]. [accessed 12th January 2019]. Available at: <https://periodicos.pucpr.br/ index.php/REBRAE/article/view/25267/23298>

Chang, S., Wang, K., Chih, W. and Tsai, W. (2012) Building customer commitment in business-to-business markets. *Industrial Marketing Management.* **41**(6), pp. 940-950.

Charlson, J. (2020) *Building Regulations*. In De Silva, C. and Charlson, J. (2020). (Eds). *Galbraith's Construction and Land Management Law for Students.* Oxon. Routledge.

Charmaz, K. (2014). *Constructing Grounded Theory.* 2nd Ed. London: Sage Publications Ltd.

Chau, P.Y.K. (1997) Re-examining a model for evaluating information center success using a structural equation modelling approach. *Decision Sciences.* **28**(2), pp. 309-334.

Chen, L. and Mohamed, S. (2008) Impact of the internal business environment on knowledge management within construction organisations. *Construction Innovation.* **8**(1), pp. 61-81.

Chenet, P., Dagger, T.S. and O'Sullivan, D. (2010) Service quality, trust, commitment and service differentiation in business relationships. *Journal of Services Marketing.* **24**(5), pp. 336-346.

Cheng, J., Proverbs, D.G. and Oduoza, C.F. (2006) The satisfaction levels of UK construction clients based on the performance of consultants: Results of a case study. *Engineering, Construction and Architectural Management.* **13**(6), pp. 567-583.

Chih, Y., Zwikael, O. and Restubog, S.L.D. (2019) Enhancing value co-creation in professional service projects: The roles of professionals, clients and their effective interactions. *International Journal of Project Management.* **37**(5), pp. 599-615.

Chou, J., Irawan, N. and Pham, A. (2013) Project management knowledge of construction professionals: cross-country study of effects on project success. *Journal of Construction Engineering and Management.* **139**(11), pp.1-15.

Chumpitaz, R. and Paparoidamis, N.G. (2004) Service quality and marketing performance in business-to-business markets: exploring the mediating role of client satisfaction. *Managing Service Quality: An International Journal***, 14**(2/3), pp. 235-248.

CIC (2008). *Survey of UK construction professional services 2005/06.* [online]. [accessed 29th August 2017]. Available at: <http://cic.org.uk/download.php?f= cicsurvey.pdf>

CIC (2010). *The impact of the recession on construction professional services.* [online]. [accessed 17th June 2017). Available at: <https://www.citb.co.uk/ documents/research/cicprof-execsummary_tcm17-18668.pdf>

CIM (2015). *A brief summary of marketing and how it works.* [online]. [accessed 11th December 2018]. Available at: <https://www.cim.co.uk/ media/4772/7ps.pdf>

CIOB (2013). *Corruption in the UK construction industry*. [online]. [accessed 2nd June 2018]. Available at: <https://www.ciob.org/sites/default/files/CIOB%20 research%20-%20Corruption%20in%20the%20UK%20Construction%20Industry% 20September% 202013.pdf>

CIOB (2015). *Rules and regulations of professional competence and conduct*. [online]. [accessed 18th November 2017] Available at:<http://www.ciob.org/sites/ default/files/Rules%20&%20Regulations_0.pdf>

CIOB (2017). *Why join?* [online]. [accessed 31st August 2017]. Available at: <http://www.ciob.org/become-a-member/why-join>

CITB. (2018). *Industry Insights: Construction skills network forecasts 2017-2021.* [online]. [accessed 4th October 2019]. Available at: <https://www.citb.co.uk/ documents/research/csn%202017-2021/csn-westmidlands-2017.pdf>

CIOB (2020). The Real Face of Construction 2020. Socio-economic analysis of the true value of the built environment. [online]. [accessed 20th June 2020]. Available at: <https://policy.ciob.org/wp-content/uploads/2020/02/The-Real-Face-of-Construction-2020.pdf>

Clark, N. (2015) *Professional services marketing handbook: how to build relationships, grow your firm and become a client champion.* 1st ed. London: Kogan Page.

Connaughton, J. and Meikle, J. (2013) The changing nature of UK construction professional service firms. *Building Research & Information***, 41**(1), pp. 95-109.

Connaughton, J., Meikle, J. and Teerikangas, S. (2015) Mergers, acquisitions and the evolution of construction professional services firms. *Construction Management and Economics,* **33**(2), pp. 146-159.

Connelly, B.L., Certo, S.T., Ireland, R.D. and Reutzel, C.R. (2011) Signalling theory: A review and assessment. *Journal of Management.* **37**(1), pp. 39-67.

Egan, J L (1998). Rethinking Construction: *Report of the Construction Task Force to the Deputy Prime Minister, John Prescott, on the Scope for Improving the Quality and Efficiency of UK Construction*. [online]. [Accessed on 18th January 2018]. Available at <https://librarysearch.wlv.ac.uk/discovery/search?query= any,contains,rethinking%20construction&tab=ALL&search_scope=MyInst_and_CI &vid=44UOWO_INST:MAIN&offset=0?>

Cooke, P., Clifton, N. and Oleaga, M. (2005) Social capital, firm embeddedness and regional development. *Regional Studies.* **39**(8), pp. 1065-1077.

Corbin, J., and Strauss, A. (2015). *Basics of Qualitative Research.* 4th Ed. London: Sage Publications.

Cox, B., Eno, B and Keaveny, S. (2018). *A Boxing Day special with Brian Cox and Brian Eno. Shaun Keaveny Show.* BBC. [online]. [accessed 26th December 2018]. Available at: <https://www.bbc.co.uk/programmes/m0001rgf>

Creswell, J.W. (2013) *Qualitative Inquiry and Research Design: Choosing among Five Approaches.* 3rd ed. Los Angeles: Sage Publications Ltd.

Creswell, J.W. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods approaches*. 5th Ed. Los Angeles: Sage Publications Ltd.

Creswell, J.W. and Plano-Clark, V. (2011). *Designing and Conducting Mixed Methods Research*. 2nd Ed. London: Sage Publications Ltd.

Cronin J.J. (Jr.), and Taylor, S.A. (1994) SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality. *The Journal of Marketing,* **58**(1) pp. 125-131.

Curran, J.M., Varki, S. and Rosen, D.E. (2010) Loyalty and its antecedents: are the relationships static? *Journal of Relationship Marketing.* **9**(4), pp. 179-199.

Czaja, R. and Blair, J. (2003) *Designing surveys: a guide to decisions and procedures.* 2nd ed. London: Pine Forge.

D'Aish. (2015). Developing internal and external relationships. *In* Clark, N. (ed.) *Professional Services Marketing Handbook: How to Build Relationships, Grow your Firm and Become a Cclient Champion*. London: Kogan Page. pp. 162-172.

Dainty, A (2009). Methodological pluralism in construction management research. *in* Knight, A. and Ruddock, L. (2009). (eds). *Advanced Research Methods in the Built Environment*. Chichester: John Wiley & Sons. pp. 1-13.

Dainty, A.R.J., Cheng, M. and Moore, D.R. (2003) Redefining performance measures for construction project managers: an empirical evaluation. *Construction Management and Economics***, 21**(2), pp. 209-218.

Davis, P.R. (2004) Relationship Marketing Techniques in Construction Projects: A Case Study Approach. *in* Khosrowshahi, F. (ed), *Proceedings of the Association of Researchers in Construction Management Twentieth Annual Conference*. Heriot-Watt University, September 2004. ARCOM, Reading, UK.

Davis, P.R. (2008) A relationship approach to construction supply chains. *Industrial Management & Data Systems***, 108**(3), pp. 310-327.

DBIS (2013). *Growth is our business: a strategy for professional and business services.* [online]. [accessed 18th June 2018]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/211842/bis-13-922-growth-is-our-business-professional-and-business-services-strategy.pdf>

DBIS (2013). *Supply Chain Analysis into the Construction Industry. BIS Research Paper no. 145*. [online]. [accessed 30th November 2019]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/252026/bis-13-1168-supply-chain-analysis-into-the-construction-industry-report-for-the-construction-industrial-strategy.pdf>

DEIS (2020). Professional and business services sector: Creating further demand and growth outside London. BEIS Research Paper Number 2020/006. [online]. [accessed 12th March, 2020]. Available at: <https://www.gov.uk/government/publications/professional-and-business-services-sector-creating-further-demand-and-growth-outside-london>

De Ruyter, K., Moorman, L. and Lemmink, J. (2001) Antecedents of commitment and trust in customer–supplier relationships in high technology markets. *Industrial Marketing Management.* **30**(3), pp. 271-286.

De Valence, G. (2019) Reframing construction within the built environment sector. Engineering, Construction, and Architectural Management. **26**(5), pp. 740-745.

De Vaus, D.A. (2013) *Surveys in Social Research.* 6th ed. London: Routledge.

Debrah, Y.A. and Ofori, G. (2006) Human resource development of professionals in an emerging economy: the case of the Tanzanian construction industry. *The International Journal of Human Resource Management,* **17**(3), pp. 440-463.

Denscombe, M. (2007) *The Good Research Guide: for Small-scale Social Research Projects.* 3rd ed. Maidenhead: Open University Press.

Denzin, N.K. (2010) Moments, mixed methods, and paradigm dialogs. *Qualitative Inquiry.* **16**(6), pp. 419-427.

Desatnick, R. L. (1987). *The Jossey-Bass Management Series. Managing to keep the Customer: How to Achieve and Maintain Superior Customer Service throughout the Organization.* San Francisco: Jossey-Bass.

Dewey, J. (1941) Propositions, warranted assertibility, and truth. *The Journal of Philosophy.* **38**(7), pp. 169-186.

Dick, A.S. and Basu, K. (1994) Customer loyalty: toward an integrated conceptual framework. *Journal of the Academy of Marketing Science.* **22**(2), pp. 99-113.

Di Loreto, M. and Gaines, T. (2016) An investigation of discrepancies between qualitative and quantitative findings in survey research. *International Journal of Learning, Teaching and Educational Research***, 15**(12), pp. 145-154.

Dinovitzer, R., Gunz, H. and Gunz, S. (2015). Professional ethics: originals applications and developments. *in* Empson, L., Muzio, D. and Broschak, J. (eds). *The Oxford Handbook of Professional Service Firms*. Oxford: Oxford University Press. pp. 113-134.

Doney, P.M. and Cannon, J.P. (1997) An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing.* **61**(2), pp. 35-51.

Doney, P.M., Barry, J.M. and Abratt, R. (2007) Trust determinants and outcomes in global B2B services. *European Journal of Marketing***, 41**(9/10), pp. 1096-1116.

Dosumu, O.S. and Aigbavboa, C. (2019) Assessing clients' satisfaction with the service quality of construction consultants in Lagos, Nigeria. African Journal of Science, Technology, Innovation and Development. **11**(6), pp. 771-779.

Duncan, T. and Moriarty, S.E. (1998) A communication-based marketing model for managing relationships. *Journal of Marketing.* **62**(2), pp. 1-13.

Dwyer, F.R., Schurr, P.H. and Oh, S. (1987) Developing buyer-seller relationships. *Journal of Marketing.* **51**(2), pp. 11-27.

Egan, J. (2011) *Relationship Marketing: Exploring Relational Strategies in Marketing.* 4th ed. Harlow, England: FT Prentice Hall.

Egemen, M. and Mohamed, A.N. (2006) Clients' needs, wants and expectations from contractors and approach to the concept of repetitive works in the Northern Cyprus construction market. *Building and Environment.* **41**(5), pp. 602-614.

Ehrenberg, A.S. (2000) *Repeat Buying: Facts Theory and Application*. London: Oxford University Press.

Eisingerich, A.B. and Bell, S.J. (2007) Maintaining customer relationships in high credence services. *Journal of Services Marketing.* **21**(4), pp. 253-262.

Empson, L., Muzio, D., Broschak, J. and Hinings, B. (2015). Researching professional service firms. *in* Empson, L., Muzio, D. and Broschak, J. (eds.) *The Oxford Handbook of Professional Service Firms.* Oxford: Oxford University Press. pp. 1-24.

Eriksson, E.P., Nilsson, T. and Atkin, B. (2008) Client perceptions of barriers to partnering. *Engineering, Construction and Architectural Management.* **15**(6), pp. 527-539.

Eriksson, K. and Vaghult, A.L. (2000) Customer retention, purchasing behaviour and relationship substance in professional services. *Industrial Marketing Management***. 29**(4), pp. 363-372.

Fan, L.C. and Fox, P.W. (2009) Exploring factors for ethical decision making: views from construction professionals. *Journal of Professional Issues in Engineering Education and Practice.* **135**(2), pp. 60-69.

Farmer, M. (2016). The Farmer Review of the UK Construction Labour Model. Construction Leadership Council. [online]. [accessed on 1st May 2021]. Available at: <https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2016/10/Farmer-Review.pdf>

Farn, C.K. and Huang, L.T., (2008). Exploring determinants of industrial customers loyalty on service providers in the e-business environment–the perspective of relationship management. *7th WSEAS International Conference on E-Activities.* Cairo. 29th-31st December 2008. WSEAS Press. pp. 60-67.

Faulconbridge, J. and Muzio, D. (2008) Organizational professionalism in globalizing law firms. *Work, Employment & Society.* **22**(1), pp. 7-25.

Feilzer, Y.M. (2010) Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research.* **4**(1), pp. 6-16.

Fellows, R. and Liu, A. (2015) *Research Methods for Construction.* 4th ed. Chichester: Wiley-Blackwell.

Field, A. P. (2005) Discovering statistics using *IBM SPSS Statistics*. 2nd ed. London: Sage

Field, A.P. (2018) *Discovering Statistics using IBM SPSS Statistics.* 5th ed. London: Sage

File, K.M., Cermak, D.S. and Prince, A.R. (1994) Word-of-mouth effects in professional services buyer behaviour. *Service Industries Journal.* **14**(3), pp. 301-314.

Fincham, R. (1999) The consultant–client relationship: critical perspectives on the management of organizational change. *Journal of Management Studies.* **36**(3), pp. 335-351.

Finlay, L. and Gough, B. (2008) *Reflexivity: A Practical Guide for Researchers in Health and Social Sciences.* Oxford: Blackwell Science.

Fischgrund, J. and Omachonu, V. (2014) Quality in construction: identifying the gaps. *International Journal of Construction Engineering and Management.* **3**(2), pp. 65-73.

Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research.* Reading, Massachusetts: Addison-Wesley.

Fokkema, M. and Greiff, S. (2017) How performing PCA and CFA on the same data equals trouble: overfitting in the assessment of internal structure and some editorial thoughts on it. *European Journal of Psychological Assessment.* **33**(6), pp. 399-402.

Fong, P.S.W. and Choi, S.K.Y. (2009) The processes of knowledge management in professional services firms in the construction industry: a critical assessment of both theory and practice. *Journal of Knowledge Management.* **13**(2), pp. 110-126

Forsythe, P. (2015) Monitoring customer perceived service quality and satisfaction during the construction process. *Construction Economics and Building.* **15**(1), pp. 19-42.

Frow, P. (2007) The meaning of commitment in professional service relationships: a study of the meaning of commitment used by lawyers and their clients. *Journal of Marketing Management***. 23**(3-4), pp. 243-265.

Fullerton, G. (2003) When does commitment lead to loyalty? *Journal of Service Research.* **5**(4), pp. 333-344.

Fullerton, G. (2005) How commitment both enables and undermines marketing relationships. *European Journal of Marketing.* **39**(11/12), pp. 1372-1388.

Fullerton, G. (2014) The moderating effect of normative commitment on the service quality-customer retention relationship. *European Journal of Marketing.* **48**(3/4), pp. 657-673.

Gadde, L. and Dubois, A. (2010) Partnering in the construction industry—problems and opportunities. *Journal of Purchasing and Supply Management.* **16**(4), pp. 254-263.

Gameson, R.N. (1991) Clients and professionals: the interface. *in* Barrett, P. and Males, M. (eds). *Practice Management: New Perspectives for the Construction Professional.* London. Chapman and Hall. pp. 165-174.

Ganesan, S. and Hess, R. (1997) Dimensions and levels of trust: implications for commitment to a relationship. *Marketing Letters.* **8**(4), pp. 439-448.

Ganesan, S., Brown, S.P., Mariadoss, B.J. and Ho, H. (2010) Buffering and amplifying effects of relationship commitment in business-to-business relationships. *Journal of Marketing Research.* **47**(2), pp. 361-373.

Gaskin, J. (2018). *SEM Boot Camp 2018: Exploratory Factor Analysis*. [online]. [accessed 1st June 2019]. Available at: <https://www.youtube.com/watch? v=sz9NjYfvkFQ>

Geyskens, I. and Steenkamp, J.E.M. (2000) Economic and social satisfaction: measurement and relevance to marketing channel relationships. *Journal ofRetailing.* **76**(1), pp. 11-32.

Geyskens, I., Jan-Benedict E. M. Steenkamp and Kumar, N. (1999) A meta-analysis of satisfaction in marketing channel relationships. *Journal of Marketing Research.* **36**(2), pp. 223-238.

Geyskens, I., Steenkamp, J.E.M., Scheer, L.K. and Kumar, N. (1996) The effects of trust and interdependence on relationship commitment: A Trans-Atlantic study. *International Journal of Research in Marketing.* **13**(4), pp. 303-317.

Giddings, L.S. and Grant, B.M. (2006) Mixed methods research for the novice researcher. *Contemporary Nurse.* **23**(1), pp. 3-11.

Gilliland, D.I. and Bello, D.C. (2002) Two sides to attitudinal commitment: The effect of calculative and loyalty commitment on enforcement mechanisms in distribution channels. *Journal of the Academy of Marketing Science.* **30**(1), pp. 24-43.

Giritli, H. and Civan, I. (2008) Personality study of construction professionals in the Turkish construction industry. *Journal of Construction Engineering and Management.* **134**(8), pp. 630-634.

Goodwyn, E. (2019). Restrictive covenants in employment contracts. [online]. [accessed on 13th January 2020]. Available at: <https://www.pinsentmasons.com /out-law/guides/restrictive-covenants-in-employment-contracts>

Gordon, I. (2000). Organizing for relationship marketing. *in* J.N. Sheth & A. Parvatiyar (eds.) *Handbook of Relationship Marketing*. California: Sage Publications Ltd. pp. 505–524.

Goo, Y. (2004) A causal model of customer loyalty in professional service firms: an empirical study. *International Journal of Management.* **21**(4), pp. 531-540.

Gounaris, S.P. (2005) Trust and commitment influences on customer retention: insights from business-to-business services. *Journal of Business Research.* **58**(2), pp. 126-140.

GOV.UK (2017). *Public procurement policy.* [online]. [accessed 13th October 2017]. Available at:
<https://www.gov.uk/guidance/public-sector-procurement-policy>

GOV.UK (2018). *Public Procurement Policy*. [online]. [accessed 25th May 2018]. Available at:
<https://www.gov.uk/guidance/public-sector-procurement-policy#public-contracts-regulations-2015>

Graham, S., (2010). *Analysis of construction-related research compared to needs of industry professionals.* [unpublished MSc dissertation]. Brigham Young University. Provo, Utah.

Greenhalgh, B. and Squires, G. (2011) *Introduction to Building Procurement.* London: Spon Press.

Greenwood, E. (1957). Attributes of a profession. *Social Work.* **2**(3). pp. 45-55.

Greenwood, R., Li, S.X., Prakash, R. and Deephouse, D.L. (2005) Reputation, diversification, and organizational explanations of performance in professional service firms. *Organization Science.* **16**(6), pp. 661-673.

Grenfell Tower Enquiry (2021). Evidence. [online]. [accessed on 16th June 2021]. Available at: <https://www.grenfelltowerinquiry.org.uk/hearings>

Gronroos, C. (1984) A service quality model and its marketing implications. *European Journal of Marketing.* **18**(4), pp. 36-44.

Gronroos, C. (1994) From marketing mix to relationship marketing. *Management Decision.* **32**(2), pp. 4-20.

Gronroos, C. (1994) *Quo Vadis*, marketing? Toward a relationship marketing paradigm. *Journal of Marketing Management***, 10**(5), pp. 347-360.

Gronroos, C. (2004) The relationship marketing process: communication, interaction, dialogue, value. *Journal of Business & Industrial Marketing.* **19**(2), pp. 99-113.

Gross. C. and Kieser, A., (2006). Are consultants moving towards professionalization? *in* Greenwood, R. and Suddaby, R. (eds.) *Professional Service Firms (Research in the Sociology of Organizations).* Volume 24. Bingley: Emerald Group Publishing Limited. pp. 69-100.

Guba, E.G. and Lincoln, Y.S. (2005). Paradigmatic Controversies. *in* Denzin, N.K. and Lincoln, Y.S. (eds.) *The Sage Handbook of Qualitative Research*. 4th ed. Thousand Oaks: Sage Publications Ltd. pp. 119-216.

Guba, E.G. and Lincoln, Y.S. (1994) Competing paradigms in qualitative research. *in* Guba, E.G. and Lincoln, Y.S. (eds.) *Handbook of Qualitative Research*. pp. 105-116.

Gummesson, E. (1978) Toward a theory of professional service marketing. *Industrial Marketing Management.* **7**(2), pp. 89-95.

Gummesson, E. (1979) The marketing of professional services—an organizational dilemma. *European Journal of Marketing.* **13**(5), pp. 308-318.

Gummesson, E. (1987) The new marketing—developing long-term interactive relationships. *Long Range Planning.* **20**(4), pp. 10-20.

Guzak, J.R. and Rasheed, A.A. (2014) Governance and growth of professional service firms. *The Service Industries Journal.* **34**(4), pp. 295-313.

Gwinner, K.P., Gremler, D.D. and Bitner, M.J. (1998) Relational benefits in services industries: the customer's perspective. *Journal of the Academy of Marketing Science.* **26**(2), pp. 101-114.

Hackett, J.A. and Hicks, C.M. (2007). Estimating as a profession in UK construction. *Engineering, Construction and Architectural Management.* **14**(1), pp. 26-51.

Haig, B.D. (2005) Exploratory factor analysis, theory generation, and scientific method. *Multivariate Behavioural Research.* **40**(3), pp. 303-329.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2014) *Multivariate Data Analysis.* 7th Ed. Harlow: Pearson Education Ltd.

Hair, J.F., Wolfinbarger, M., Money, A.H., Samouel, P. and Page, M.J. (2015) *Essentials of Business Research Methods.* 2nd ed. Oxon: Routledge.

Halinen, A. and Jaakkola, E. (2012) Marketing in professional service firms: turning expertise into customer perceived value. *in* Reihlen, M. and Werr, A. (eds.) *Handbook of Research on Entrepreneurship in Professional Services.* Cheltenham: Edward Elgar Publishing. pp. 219-237.

Hall, M. and Jaggar, D. (1998). The importance of cultural differences to British construction professionals working internationally. *Proceeding of the 14th ARCOM Annual Conference.* Reading. 9-11th September 1998. Association of Researchers in Construction Management. pp. 60-68.

Hall, R.H. (1968) Professionalization and Bureaucratization. *American Sociological Review.* **33**(1), pp. 92-104.

Halliday, T. (1987). Knowledge mandates: collective influence by scientific, normative and syncretic professions. *British Journal of Sociology*. **36**. pp. 421–427.

Hallowell, R. (1996) The relationships of customer satisfaction, customer loyalty, and profitability: an empirical study. *International Journal of Service Industry Management.* **7**(4), pp. 27-42.

Hamilton, D.L. and Sherman, S.J. (1996) Perceiving persons and groups. *Psychological Review.* **103**(2), pp. 336.

Hammersley, M. (2003) Recent Radical Criticism of Interview Studies: Any implications for the sociology of education? *British Journal of Sociology of Education.* **24**(1), pp. 119-126.

Hansen, H., Samuelsen, B.M. and Silseth, P. (2008) Customer perceived value in B-t-B service relationships: investigating the importance of corporate reputation. *Industrial Marketing Management.* **37**(2), pp. 206-217.

Haq, M. (2015) A comparative analysis of qualitative and quantitative research methods and a justification for use of mixed methods in social research. *University of Bradford Annual PhD Conference.* School of Management, University of Bradford. pp. 1-22.

Harlacher, D. and Reihlen, M. (2014) Governance of professional service firms: a configurational approach. *Business Research.* **7**(1), pp. 125-160.

Harris, L.C. and Ogbonna, E. (2002) The unintended consequences of culture interventions: a study of unexpected outcomes. *British Journal of Management.* **13**(1), pp. 31-49.

Harriss, C. (1998) Why research without theory is not research. A reply to Seymour, Crook and Rooke. *Construction Management and Economics.* **16**(1), pp. 113-116.

Hart, W.D. (2008) Reconstructing a common faith. A*merican Journal of Theology & Philosophy.* **29**(3), pp. 271-288.

Harty, C. and Leiringer, R. (2007) Social science research and construction: balancing rigour and relevance. *CME 25: Construction Management and Economics 25th Anniversary Conference-Past, Present and Future.* University of Reading, UK 16th–18th July 2007. University of Reading. pp. 1571-1583.

Harvey, W.S and Mitchell, V.W. (2015). Marketing and reputation within professional service firms. *in* Empson, L., Muzio, D. and Broschak, J. (eds.) *The Oxford Handbook of Professional Service Firms*. Oxford. Oxford University Press. pp. 279-303.

Harwood, T.G., Garry, T., and Broderick, A.J. (2008). *Relationship Marketing: Perspectives, Dimensions and Contexts*. New York. McGraw-Hill.

Hausman, A.V. (2003) Professional service relationships: a multi-context study of factors impacting satisfaction, re-patronization, and recommendations. *Journal of Services Marketing.* **17**(3), pp. 226-242.

Havenvid, M.I., Hulthen, K., Linne, A. and Sundquist, V. (2016) Renewal in construction projects: tracing effects of client requirements. *Construction Management and Economics.* **34**(11), pp. 790-807.

Hearn, J. (1982). Notes on patriarchy, professionalization and the semi-professions. *Sociology.* **16**(2). pp. 184-202.

Heightchew, R.E. (1999) Client loyalty: winning more work from existing clients. *Journal of Management in Engineering.* **15**(6), pp. 36-40.

Heirati, N., Henneberg, S.C., Richter, A. and Harste, R. (2019) Differential importance of social and economic determinants of relationship performance in professional services. *Industrial Marketing Management.* **76.** pp. 23-35.

Helgesen, O. (2006) Are loyal customers profitable? Customer satisfaction, customer (action) loyalty and customer profitability at the individual level. *Journal of Marketing Management.* **22**(3-4), pp. 245-266.

Hennig-Thurau, T., Gwinner, K.P. and Gremler, D.D. (2002) Understanding relationship marketing outcomes: an integration of relational benefits and relationship quality. *Journal of Service Research.* **4**(3), pp. 230-247.

Hess, R.L., Ganesan, S. and Klein, N.M. (2003) Service failure and recovery: The impact of relationship factors on customer satisfaction. *Journal of the Academy of Marketing Science.* **31**(2), pp. 127-145.

Hewage, K.N., Gannoruwa, A. and Ruwanpura, J.Y. (2011) Current status of factors leading to team performance of on-site construction professionals in Alberta building construction projects. *Canadian Journal of Civil Engineering.* **38**(6), pp. 679-689.

Hibbert, P. (2013) Approaching reflexivity through reflection: Issues for critical management education. *Journal of Management Education.* **37**(6), pp. 803-827.

Higham, A.P. and Thomson, C. (2015). An evaluation of construction professional's sustainability literacy in North West England. *Association of Researchers in Construction Management. 31st Annual ARCOM Conference.* Lincoln. 7-8 September 2016. Association of Researchers in Construction Management. pp. 417-426.

Hill, T.P. (1977) On goods and services. *Review of Income and Wealth.* **23**(4), pp. 315-338.

HM Government. (2018). *Professional and Business Services Sector Report*. [online]. [accessed 18th June 2018]. Available at: <https://www.parliament.uk/documents/commons-committees/Exiting-the-European-Union/17-19/Sectoral%20Analyses/28-Professional-and-Business-Services-Report%20.pdf>

HM Treasury. (2020). National Infrastructure Strategy. [online]. [accessed on 1st May 2021]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938539/NIS_Report_Web_Accessible.pdf>

HMSO (1994). *Constructing the Team.* [online]. [accessed 17th November 2018]. Available at: <http://constructingexcellence.org.uk/wp-content/uploads/2014/10/Constructing-the-team-The-Latham-Report.pdf>

Hogan, J.E., Lemon, K.N. and Libai, B. (2004) Quantifying the ripple: word-of-mouth and advertising effectiveness. *Journal of Advertising Research.* **44**(3), pp. 271-280.

Hong, S.C. and Goo Y.J.J. (2004) A causal model of customer loyalty in professional service firms: An empirical study. International Journal of Management. **21**(4), pp. 531.

Houlder, D. and Williamson, P. (2012) Professional service futures: The professional challenge. *Business Strategy Review.* **23**(4), pp. 50-55.

Howden, C. and Pressey, A.D. (2008) Customer value creation in professional service relationships: the case of credence goods. *The Service Industries Journal.* **28**(6), pp. 789-812.

Howell, D.C. (2012). *Statistical Methods for Psychology* 7th Ed. California. Wadsworth: Cengage Learning.

Howerth, D. (2012). *Most architects to be excluded from public procurement.* [online]. [accessed on 19th July 2019]. Available at: <https://www.dezeen.com/2012/07/17/architecture-firms-excluded-from-public-procurement/>

Hoxley, M. (1995) How do clients select a surveyor? *Structural Survey.* **13**(2), pp. 6-12.

Hoxley, M. (2000a) Are competitive fee tendering and construction professional service quality mutually exclusive? *Construction Management and Economics.* **18**(5), pp. 599-605.

Hoxley, M. (2000b) Measuring UK construction professional service quality: the what, how, when and who. *International Journal of Quality & Reliability Management.* **17**(4/5), pp. 511-526.

Hoxley, M. (2001) Purchasing UK public sector property and construction professional services: competition v quality. *European Journal of Purchasing and Supply Management.* **7**(2), pp. 133-139.

Hoxley, M. (2007) The fee tendering and service quality issue revisited. *Property Management.* **25**(2), pp. 180-192.

Hoxley (2009). Questionnaire design and factor analysis. *in* Knight, A. and Ruddock, L. (eds.) *Advanced Research Methods in the Built Environment.* Chichester. John Wiley & Sons. pp. 122-134.

HSE (2015). *Managing health and safety in construction. Construction (Design and Management) Regulations 2015*. [online]. [Accessed on 30th August 2017]. Available at: <http://www.hse.gov.uk/pubns/priced/l153.pdf>

Huang, L., Leu, J. and Farn, C. (2008) Factors affecting customer loyalty to application service providers in different levels of relationships. 16th *European Conference on Information Systems.* June 9th-11th. Galway, Ireland. ECIS. pp. 37-48.

Hutt, M.D. and Speh, T.W. (2007). *Business Marketing Management.* 10th ed. USA: South Western.

Ibn-Mohammed, T. (2017) Application of mixed-mode research paradigms to the building sector: A review and case study towards decarbonising the built and natural environment. *Sustainable Cities and Society.* **35.** pp. 692-714.

Ibrahim, O.O. (2019) Knowledge management and professionals in Nigerian construction firms: barriers, benefits and capabilities. *Journal of Architecture, Planning and Construction Management.* **9**(2). pp. 69-86.

ICO (2018). *Guide to the General Data Protection Regulation*. [online]. [accessed on 26th June 2019]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/711097/guide-to-the-general-data-protection-regulation-gdpr-1-0.pdf>

IOSE (2017). *Code of Conduct and Guidance Notes.* [online]. [accessed 18th November [2017]. Available at: <https://www.istructe.org/downloads/about-us/governance/code-of-conduct-and-guidance-notes-20100902.pdf>

IOSH (2016). *Health and Safety in a Changing Landscape.* [online]. [accessed 14th November 2017]. Available at: <file:///C:/Users/nwilliams/Downloads/POL3647%20HS%20in%20a%20shifting%20landscape%20report.pdf>

Izogo, E.E. (2016) Should relationship quality be measured as a disaggregated or a composite construct? *Management Research Review.* **39**(1), pp. 115-131.

Izwan, J., Sayuti, I.M. and Ramli, N.I. (2019) *The knowledge competency of civil engineers in construction industry*. *Earth and Environmental Science*. **244**(1). pp.1-5.

Jaafar, M., Aziz, A.R.A. and Wai, A.L.S. (2008) Marketing practices of professional engineering consulting firms: Implement or not to implement? *Journal of Civil Engineering and Management.* **14**(3), pp. 199-206.

Jaakkola, E. and Halinen, A. (2006) Problem solving within professional services: evidence from the medical field. *International Journal of Service Industry Management.* **17**(5), pp. 409-429.

Jabareen, Y. (2009) Building a conceptual framework: philosophy, definitions, and procedure. *International Journal of Qualitative Methods.* **8**(4), pp. 49-62.

Javadi, M. and Zarea, K. (2016) Understanding thematic analysis and its pitfall. *Journal of Client Care.* **1**(1), pp. 33-39.

Jayawardhena, C., Souchon, A.L., Farrell, A.M. and Glanville, K. (2007) Outcomes of service encounter quality in a business-to-business context. *Industrial Marketing Management.* **36**(5), pp. 575-588.

Jeong, M. and Oh, H. (2017) Business-to-business social exchange relationship beyond trust and commitment. *International Journal of Hospitality Management.* **65** pp. 115-124.

Jewell, C. and Flanagan, R. (2012) Measuring construction professional services exports: a case for change. *Building Research & Information.* **40**(3), pp. 337-347.

Jewell, C., Flanagan, R. and Anac, C. (2010) Understanding UK construction professional services exports: definitions and characteristics. *Construction Management and Economics.* **28**(3), pp. 231-239.

Jewell, C., Flanagan, R. and Lu, W. (2014) The dilemma of scope and scale for construction professional service firms. *Construction Management and Economics.* **32**(5), pp. 473-486.

Jiang, Z., Henneberg, S.C. and Naude, P. (2011) Supplier relationship management in the construction industry: the effects of trust and dependence. *Journal of Business & Industrial Marketing.* **27**(1), pp. 3-15.

Jiang, Z., Shiu, E., Henneberg, S. and Naude, P. (2016) Relationship quality in business to business relationships-reviewing the current literatures and proposing a new measurement model. *Psychology & Marketing.* **33**(4), pp. 297-313.

Johnson, J.T., Barksdale, H.C. and Boles, J.S. (2001) The strategic role of the salesperson in reducing customer defection in business relationships. *The Journal of Personal Selling and Sales Management.* **21**(2), pp. 123-134.

Johnson, R.B. and Onwuegbuzie, A.J. (2004) Mixed methods research: A research paradigm whose time has come. *Educational Researcher.* **33**(7), pp. 14-26.

Kai-Uwe Brock, J. and Yu Zhou, J. (2012) Customer intimacy. *Journal of Business & Industrial Marketing*. **27**(5), pp. 370-383.

Kamara, J.M., Anumba, C.J. and Evbuomwan, N.F.O. (1999) Client requirements processing in construction: a new approach using QFD. *Journal of Architectural Engineering.* **5**(1), pp. 8-15.

Kamara, J.M., Anumba, C.J. and Evbuomwan, N.F.O. (2002) *Capturing client requirements in construction projects.* London: Thomas Telford.

Karantinou, K.M. and Hogg, M.K. (2007) Developing and managing relational market-based assets in professional services: client relationships in management consultancy. *Marketing Management Journal.* **17**(2). pp. 16-39.

Keh, H.T. and Xie, Y. (2009) Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment. *Industrial Marketing Management.* **38**(7), pp. 732-742.

Keiningham, T.L., Cooil, B., Aksoy, L., Andreassen, T.W. and Weiner, J. (2007) The value of different customer satisfaction and loyalty metrics in predicting customer retention, recommendation, and share-of-wallet. *Managing Service Quality: An International Journal.* **17**(4), pp. 361-384.

Keiningham, T.L., Frennea, C.M., Aksoy, L., Buoye, A. and Mittal, V. (2015) A five-component customer commitment model: implications for repurchase intentions in goods and services industries. *Journal of Service Research.* **18**(4), pp. 433-450.

Keller, K.L., Kotler, P., Goodman, B. and Hansen, T. (2012). *Marketing Management*. 2nd Ed. Harlow. Pearson.

Kelly, S.J. (2004) Measuring attitudinal commitment in business-to-business channels. *Marketing Intelligence & Planning.* **22**(6), pp. 636-651.

Kim, H. (2014) The role of WOM and dynamic capability in B2B transactions. *Journal of Research in Interactive Marketing.* **8**(2), pp. 84-101.

Kirchmajer, L. and Patterson, P. (2004) The role of interpersonal communication in the development of client trust and closeness in a SME professional services context. *Small Enterprise Research.* **12**(1), pp. 45-56.

Kissi, J., Dainty, A. and Liu, A. (2012) Examining middle managers' influence on innovation in construction professional services firms: A tale of three innovations. *Construction Innovation.* **12**(1), pp. 11-28.

Kivrak, S., Ross, A. and Arslan, G. (2008). Effects of cultural differences in construction projects: An investigation among UK construction professionals. *Proceedings of the International Conference on Multi-National Construction Projects–Securing high Performance through Cultural awareness and Dispute Avoidance.* 21st November 2008. Shang-Hai. China. CIB. pp. 21-23.

Knight, A. and Ruddock, L. (2009) *Advanced Research Methods in the Built Environment.* Oxford: Wiley-Blackwell.

Kotler, P. and Keller, K.L. (2006) *Marketing Management* 12th ed. *New Jersey: Pearson.*

Kristensen K. and Eskildsen J. (2011) The validity of the Net Promoter Score as a business performance measure. *International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering.* 17th June 2011. Xi'an, China. IEEE. pp. 970-974.

Kroll (2019). Global Fraud and Risk Report 2019/20, 11th Ed. [online]. [accessed 2nd January 2020]. Available at: <https://www.kroll.com/-/media/kroll/pdfs /publications/global-fraud-and-risk-report-2019-20.ashx>

Kuhn, T.S. (1970) *The Structure of Scientific Revolutions.* 2nd ed. Chicago: University of Chicago Press.

Kumar, C. (2009) John Dewey, Reconstruction in Philosophy (1920). *Philosophical Papers.* **38**(1), pp. 111-128.

Kumar, N., Hibbard, J.D. and Stern, L.W. (1994). *The nature and consequences of marketing channel intermediary commitment.* Cambridge, Massachusetts: Marketing Science Institute.

Kutner, J.S., Steiner, J.F., Corbett, K.K., Jahnigen, D.W. and Barton, P.L. (1999) Information needs in terminal illness. *Social Science & Medicine.* **48**(10), pp. 1341-1352.

Lacey, R. and Morgan, R.M. (2008) Customer advocacy and the impact of B2B loyalty programs. *Journal of Business & Industrial Marketing.* **24**(1), pp. 3-13.

Laing, A.W. and Lian, P.C. (2005) Inter-organisational relationships in professional services: towards a typology of service relationships. *Journal of Services Marketing.* **19**(2), pp. 114-128.

Lam, S.Y., Shankar, V., Erramilli, M.K. and Murthy, B. (2004) Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science.* **32**(3), pp. 293-311.

Lambe, C.J., Wittmann, C.M. and Spekman, R.E. (2001) Social exchange theory and research on business-to-business relational exchange. *Journal of Business-to-Business Marketing.* **8**(3), pp. 1-36.

Lawler, E.J. (2001) An affect theory of social exchange. *American Journal of Sociology.* **107**(2), pp. 321-352.

Lawrence, J.M., Crecelius, A.T., Scheer, L.K. and Lam, S.K. (2019) When it pays to have a friend on the inside: contingent effects of buyer advocacy on B2B suppliers. *Journal of the Academy of Marketing Science*. **47**(5), pp. 837-857.

Lee, Y. and Bellman, S. (2008) An augmented model of customer loyalty for organizational purchasing of financial services. *Journal of Business-to-Business Marketing.* **15**(3), pp. 290-322.

Lester, S. (2016). The development of self-regulation in four UK professional communities. *Professions and Professionalism.* **6**(1), pp. 1-14.

Leung, L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care.* **4**(3), pp. 324-327.

Leung, M. and Chan, H.K.L. (2007) Antecedents of commitment in construction management. *Construction Management and Economics.* **25**(2), pp. 113-127.

Leung, M., Chen, D. and Yu, J. (2008) Demystifying moderate variables of the interrelationships among affective commitment, job performance, and job satisfaction of construction professionals. *Journal of Construction Engineering and Management.* **134**(12), pp. 963-971.

Leung, M., Chong, A., Ng, S.T. and Cheung, M.C. (2004) Demystifying stakeholders' commitment and its impacts on construction projects. *Construction Management & Economics.* **22**(7), pp. 701-715.

Levy, D.S. and Lee, C.K.C. (2009) Switching behaviour in property related professional services. *Journal of Property Research.* **26**(1), pp. 87-103.

Lian, P.C.S. and Laing, A.W. (2007) Relationships in the purchasing of business to business professional services: The role of personal relationships. *Industrial Marketing Management.* **36**(6), pp. 709-718.

Lincoln, Y.S. (2010) “What a long, strange trip it’s been…”: Twenty-five years of qualitative and new paradigm research. *Qualitative Inquiry.* **16**(1), pp. 3-9.

Lingard, H., Peihua Zhang, R., Blismas, N., Wakefield, R. and Kleiner, B. (2015) Are we on the same page? Exploring construction professionals' mental models of occupational health and safety. *Construction Management and Economics.* **33**(1), pp. 73-84.

Lingard, H.C., Yip, B., Rowlinson, S. and Kvan, T. (2007) The experience of burnout among future construction professionals: A cross-national study. *Construction Management and Economics.* **25**(4), pp. 345-357.

Ljasan, K. and Ahmed, V (2016). Studentification and the housing needs of international students in Johannesburg: An inbedded mixed methods approach. *in* Ahmed, V, Opoku, A, and Aziz, Z (eds.) *Research Methodology in the Built Environment a Selection of Case Studies.* London: Routledge. pp. 1-18.

Love, P.E.D., Davis, P.R., Edwards, D.J. and Baccarini, D. (2008) Uncertainty avoidance: public sector clients and procurement selection. *International Journal of Public Sector Management.* **21**(7), pp. 753-776.

Love, P.E.D., Holt, G.D. and Li, H. (2002) Triangulation in construction management research. *Engineering, Construction and Architectural Management.* **9**(4), pp. 294-303.

Lowendahl, B.R. (2005). *Strategic Management of Professional Service Firms.* Abingdon. Marston Book Services.

Lowry, P.B. and Gaskin, J. (2014) Partial Least Squares (PLS) Structural equation modeling (SEM) for building and testing behavioral causal theory: when to choose it and how to use it. *IEEE Transactions on Professional Communication*. **57**(2), pp. 123-146.

Lu, P., Guo, S., Qian, L., He, P. and Xu, X. (2015) The effectiveness of contractual and relational governances in construction projects in China. *International Journal of Project Management.* **33**(1), pp. 212-222.

Lu, S. and Sexton, M. (2006) Innovation in small construction knowledge-intensive professional service firms: a case study of an architectural practice. *Construction Management and Economics***, 24**(12), pp. 1269-1282.

Lu, W., Jewell, C., Flanagan, R. and Ye, K. (2013) Developing construction professional services in the international market: SWOT analysis of China. *Journal of Management in Engineering.* **29**(3), pp. 302-313.

Lynch, S.M. (2007) *Introduction to Applied Bayesian Statistics and Estimation for Social Scientists.* London: Springer.

Madden, T.J., Ellen, P.S. and Ajzen, I. (1992) A comparison of the theory of planned behaviour and the theory of reasoned action. *Personality and Social Psychology Bulletin.* **18**(1), pp. 3-9.

Maister, D.H. (1982) Balancing the professional service firm. *Sloan Management Review.* **24**(1), pp. 15-29.

Malhotra, N. (2003) The nature of knowledge and the entry mode decision. *Organization Studies.* **24**(6), pp. 935-959.

Malhotra, N. and Morris, T. (2009) Heterogeneity in professional service firms. *Journal of Management Studies.* **46**(6), pp. 895-922.

Malina, M.A., Norreklit, H.S.O. and Selto, F.H. (2011) Lessons learned: advantages and disadvantages of mixed method research. *Qualitative Research in Accounting & Management.* **8**(1), pp. 59-71.

Manu, E., Ankrah, N.A., Chinyio, E. and Proverbs, D.G. (2015) Trust influencing factors in main contractor and subcontractor relationships during projects. *International Journal of Project Management.* **33**(7), pp. 1495-1508.

Manu, E., Ankrah, N.A., Chinyio, E. and Proverbs, D.G. (2012) Control influence on trust and relational governance in the client-contractor dyad. In: S.D. Smith (ed.) *28th Annual ARCOM Conference*. 3-5th September 2012. Edinburgh. Association of Researchers in Construction Management. pp. 665-674.

Marshall, C. and Rossman, G.B. (2014) *Designing Qualitative Research.* London: Sage Publications Ltd.

Martenson, R. (2008) How financial advisors affect behavioural loyalty. *International Journal of Bank Marketing.* **26**(2), pp. 119-147.

Maslow, A.H. (1943) A theory of human motivation. *Psychological Review.* **50**(4), pp. 370-396.

Mason, J. (2008). Promoting ethical improvement in the construction industry. A single professional Code? *Construction and Building Research Conference of the*

Royal Institution of Chartered Surveyors. 4-5 September 2008. Dublin. COBRA. pp. 194-205.

Maxwell, J.A. (2005) *Qualitative Research Design: An Interactive Approach.* 2nd ed. London: Sage Publications Ltd.

Mazzarol, T., Sweeney, J.C. and Soutar, G.N. (2007) Conceptualizing word-of-mouth activity, triggers and conditions: an exploratory study. *European Journal of Marketing.* **41**(11), pp. 1475-1494.

Mbugua, L.M., Harris, P., Holt, G.D. and Olomolaiye, P.O. (1999) A framework for determining critical success factors influencing construction business performance. *Association of Researchers in Construction Management 15th Annual Conference.* September 15-17, Liverpool John Moore's University. Association of Researchers in Construction Management. pp. 255-264.

McColl-Kennedy, J.R., Sweeney, J.C., Soutar, G.N. and Amonini, C. (2008) Professional Service firms are relationship marketers: but does size matter? *Australasian Marketing Journal.* **16**(1), pp. 30-47.

McGeorge, W.D., Zou, P. and Palmer, A. (2013) *Construction Management New Directions.* 3rd ed. Chichester: John Wiley & Sons.

Menacere, K. (2016). When more does not mean better. Selecting a research methodology. *in* Ahmed, V., Opuku, A.Z. and Aziz, Z. (eds.) *Research Methodology in the Built Environment: A Selection of Case Studies.* New York: Routledge Ltd. pp. 11-31.

Meyer, J.P. and Allen, N.J. (1991) A three-component conceptualization of organizational commitment. *Human Resource Management Review.* **1**(1), pp. 61-89.

Meyer, J.P., Stanley, D.J., Herscovitch, L. and Topolnytsky, L. (2002) Affective, continuance, and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behaviour.* **61**(1), pp. 20-52.

Midgley, G., Nicholson, J.D. and Brennan, R. (2017) Dealing with challenges to methodological pluralism: the paradigm problem, psychological resistance and cultural barriers. *Industrial Marketing Management.* **62,** pp. 150-159.

Miles, M.B., Huberman, A.M. and Saldana, J. (2014) *Qualitative Data Analysis: A Method Sourcebook.* California*:* Sage Publications Ltd.

Mittal, B. (2016) Retrospective: why do customers switch? The dynamics of satisfaction versus loyalty. *Journal of Services Marketing.* **30**(6), pp. 569-575.

Modus (2017a). *Modus: The Work Issue.* [online]. [accessed 13th November 2017]. Available at: <http://www.rics.org/uk/news/journals/modus/the-work-issue/>

Modus (2017b). *Modus: The Adaptable Issue.* [online]. [accessed 13th November 2017]. Available at: <http://www.rics.org/uk/news/journals/modus/the-adaptable-issue/>

Mohamad, N., Abdul Rahman, H.M., Usman, I. and M. Tawil, N. (2015) Ethics education and training for construction professionals in Malaysia. *Asian Social Science.* **11**(4), pp. 55-64.

Mohyin, N.A., Dainty, A.R.J. and Carrillo, P.M. (2009) Managing knowledge workers' commitment in small construction professional firms. *in* Dainty, A.R.J. (eds.) 25th Annual Association of Researchers in Construction Management Conference. 7-9 September 2009, Nottingham. Association of Researchers in Construction Management. pp. 125-134.

Mohyin, N., Dainty, A.R.J and Carrillo, P. (2012) HRM strategies for managing employee commitment: A case study of small construction professional services firms. Engineering Project Organizations 2012 Conference. 10-12 July 2012. Colorado: EPOS. pp. 1-22.

Molinari, L.K., Abratt, R. and Dion, P. (2008) Satisfaction, quality and value and effects on repurchase and positive word-of-mouth behavioural intentions in a B2B services context. *Journal of Services Marketing.* **22**(5), pp. 363-373.

Moore, M.L., Ratneshwar, S. and Moore, R.S. (2012) Understanding loyalty bonds and their impact on relationship strength: a service firm perspective. *Journal of Services Marketing.* **26**(4), pp. 253-264.

Moorman, C., Deshpande, R. and Zaltman, G. (1993) Factors affecting trust in market research relationships. *Journal of Marketing.* **57**(1), pp. 81-101.

Moorman, C., Zaltman, G. and Deshpande, R. (1992) Relationships between providers and users of market research: the dynamics of trust within and between organizations. *Journal of Marketing Research***. 29**(3), pp. 314-328.

Morgan, D.L. (1998) Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qualitative Health Research.* **8**(3), pp. 362-376.

Morgan, D.L. (2007) Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research.* **1**(1), pp. 48-76.

Morgan, D.L. (2014) Pragmatism as a paradigm for social research. *Qualitative Inquiry.* **20**(8), pp. 1045-1053.

Morgan, D.L. (2015) From themes to hypotheses: following up with quantitative methods. *Qualitative Health Research*. **25**(6), pp. 789-793.

Morgan, D.L. (2018) Themes, theories, and models. *Qualitative Health Research.* **28**(3), pp. 339-345.

Morgan, R.E. and Morgan, N.A. (1991) An appraisal of the marketing development in engineering consultancy firms. *Construction Management and Economics.* **9**(4), pp. 355-368.

Morgan, R.M. and Hunt, S.D. (1994) The commitment-trust theory of relationship marketing. *Journal of Marketing.* **58**(3), pp. 20-38.

Morris, A. (2015) *A Practical Introduction to In-depth Interviewing.* Los Angeles: Sage Publications Ltd.

Murphy, R. (2016) Construction professional service firm management: a longitudinal study of strategic planning in Irish quantity surveying practices. The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors. 20-22 Sept 2016. Toronto, Canada. COBRA. pp. 1-9.

Murphy, R. and Henderson, I. (2013) The strategic planning process in complex settings: the case of construction professional service firms. *Strategic Management Society Special Conference on Strategy in Complex Settings.* Dublin. 20th June 2013. School of Surveying and Construction Management. pp. 1-3.

Narayandas, D. (2005) *Building Loyalty in Business Markets*, Boston: Harvard Business School Press.

Nardi, P.M. (2006) *Doing Survey Research: A Guide to Quantitative Methods.* 2nd ed. London: Pearson/Allyn and Bacon.

Naumann, E., Haverila, M., Sajid Khan, M. and Williams, P. (2010) Understanding the causes of defection among satisfied B2B service customers. *Journal of Marketing Management.* **26**(9-10), pp. 878-900.

Newman, J.W. and Werbel, R.A. (1973) Multivariate analysis of brand loyalty for major household appliances. *Journal of Marketing Research.* **10**(4), pp. 404-409.

Newsom, J.T. (2018) Minimum sample size recommendations. *Psychology: Structural Equation Modelling.* 523/623. pp. 1-3.

Odusami, K.T. (2002) Perceptions of construction professionals concerning important skills of effective project leaders. *Journal of Management in Engineering.* **18**(2), pp. 61-67.

Office for National Statistics (2018a). *Construction Statistics, Great Britain: 2018* [online]. [accessed 12th May 2019]. Available at: <file:///C:/Users/nwilliams /Downloads/Construction%20statistics%20Great%20 Britain%202018.pdf>

Office for National Statistics (2018b). *UK Business Activity Size and Location: 2018.* [online]. [accessed 12th May 2019]. Available at <file:///C:/Users/ nwilliams/Downloads/UK%20business%3B%20activity%20size%20and%20loc ation%202018.pdf>

Ojo, G.K. (2011) Effective marketing strategies and the Nigerian construction professionals. *African Journal of Marketing Management.* **3**(12), pp. 303-311.

Oke, A.E. (2013) Project management leadership styles of Nigerian construction professionals. *International Journal of Construction Project Management.* **5**(2), pp. 159-169.

Oke, A.E., Olatunji, S.O., Awodele, A.O., Akinola, J.A. and Kuma-Agbenyo, M. (2016) Importance of team roles composition to success of construction projects. *International Journal of Construction Project Management.* **8**(2), pp. 141.

Olatunji, S.O., Akinola, J.A., Oke, A.E. and Osakuade, A.O. (2014) Construction professionals' team roles and their performance. *International Journal of Advanced Technology in Engineering and Science.* **2**(8), pp. 308-316.

Olatunji, O.A. (2006) Assessing client's confidence and satisfaction in construction professionals in Nigeria. *Proceedings of the International Conference on Construction Culture, Innovation and Management, 26th-29th November 2006.* Dubai. CCIM. pp. 17-18.

Oliver, R.L. (1999) Whence consumer loyalty? *Journal of Marketing.* **63.** pp. 33-44.

Oliver, R.L., 2014. *Satisfaction: A Behavioural Perspective on the Consumer.* 2nd ed. London. Routledge.

Oluwatayo, A.A. and Amole, D. (2011) Architectural firms: Workforce, business strategy and performance. *Australasian Journal of Construction Economics and Building.* **11**(4), pp. 21-44.

Onukwube, H.N. and Lyagba, R. (2011) Construction professionals job performance and characteristics: a comparison of indigenous and expatriate construction companies in Nigeria. *Australasian Journal of Construction Economics and Building,* **11**(2), pp. 71-83.

Owolabi, O.S.B. and Olatunji, A.S. (2014) The roles of construction professionals in the Nigeria's Construction Industry. *IOSR Journal of Humanities and Social Science.* **19**(11), pp. 5-10.

Oxford University Press (2018) *Commitment.* [online]. [accessed 21st July 2018]. Available at: <https://en.oxforddictionaries. com/definition/commitment>

Oyedele, L.O. (2010) Sustaining architects' and engineers' motivation in design firms: An investigation of critical success factors. *Engineering, Construction and Architectural Management.* **7**(2), pp. 180-196.

Oyegoke, A. (2011) The constructive research approach in project management research. *International Journal of Managing Projects in Business.* **4**(4), pp. 573-595.

Palihawadana, D. and Barnes, B.R. (2004) Client loyalty and defection in the corporate legal industry. *The Service Industries Journal.* **24**(4), pp. 101-114.

Pallant, J.F. (2016) *SPSS Survival Manual: A Step by Step Guide to Data Analysis using IBM SPSS.* 6th ed. Sydney: Allen & Unwin.

Palmatier, R.W., Dant, R.P., Grewal, D. and Evans, K.R. (2006) Factors influencing the effectiveness of relationship marketing: a meta-analysis. *Journal of Marketing.* **70**(4), pp. 136-153.

Palmatier, R.W., Scheer, L.K., Jan-Benedict E. and Steenkamp, M. (2007) Customer loyalty to whom? Managing the benefits and risks of salesperson-owned loyalty. *Journal of Marketing Research.* **44**(2), pp. 185-199.

Panhwar, A.H., Ansari, S. and Shah, A.A. (2017) Post-positivism: an effective paradigm for social and educational research. *International Research Journal of Arts and Humanities.* **45**(45), pp. 253-259.

Paparoidamis, N.G., Katsikeas, C.S. and Chumpitaz, R. (2017) The role of supplier performance in building customer trust and loyalty: a cross-country examination. *Industrial Marketing Management.* **78** pp. 183-197.

Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1991) Understanding customer expectations of service. *Sloan Management Review.* **32**(3), pp. 39.

Parasuraman, A., Zeithaml, V. and Berry, L. (2002) SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Retailing: Critical Concepts.* **64**(1), pp. 140.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985) A conceptual model of service quality and its implications for future research. *Journal of Marketing.* **49**(4), pp. 41-50.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1994) Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *Journal of Marketing.* **58**(1), pp. 111-124.

Patterson, P. (2016) Retrospective: tracking the impact of communications effectiveness on client satisfaction, trust and loyalty in professional services. *Journal of Services Marketing.* **30**(5), pp. 485-489.

Pemer, F. and Skjolsvik, T. (2019) The cues that matter: Screening for quality signals in the ex-ante phase of buying professional services. *Journal of Business Research.* **98,** pp. 352-365.

Pervan, S.J. and Johnson, L.W. (2002) Interpreting value in relationship marketing: a social exchange theory perspective. *International Quarterly Journal of Marketing.* **2**(1-4), pp. 21-33.

Peter, O.O., Eze, E.C. and Anthony, A.A. (2019) Assessment of quantity surveying firms' process and product innovation drive in Nigeria. *Journal of Management.* **2**(2), pp. 22-38.

Pheng, L.S. and Ming, K.H (1997) Formulating a strategic marketing mix for quantity surveyors. *Marketing Intelligence & Planning.* **15**(6), pp. 273-280.

Pheng, L.S. and Gracia, T.S.L. (2002) Relationship marketing: a survey of QS firms in Singapore. *Construction Management & Economics.* **20**(8), pp. 707-721.

Piroozfar, P., Farr, E.R., Zadeh, A.H., Inacio, S.T., Kilgallon, S. and Jin, R. (2019) Facilitating building information modelling (BIM) using integrated project delivery (IPD): A UK perspective. *Journal of Building Engineering.* **26,** pp. 100907.

Podsakoff, P.M., MacKenzie, S.B., Lee, J. and Podsakoff, N.P. (2003) Common method biases in behavioural research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology.* **88**(5), pp. 879-903.

Ponder, N., Holloway, B.B. and Hansen, J.D. (2016) The mediating effects of customers' intimacy perceptions on the trust-commitment relationship. *Journal of Services Marketing***. 30**(1), pp. 75-87.

Poon, J. and Hoxley, M. (2010) Use of moral theory to analyse the ethical codes of built environment professional organisations. *International Journal of Law in the Built Environment.* **2**(3), pp. 260-275.

Powell, A. (2019). Women and the economy. Briefing paper number CBP06838. House of Commons Library. [online]. [accessed 14th October 2019]. Available at: <file:///C:/Users/Nick%20Williams/Downloads/SN06838.pdf>

Prakash, A. and Phadtare, M. (2018) Service quality for architects: scale development and validation. *Engineering, Construction and Architectural Management.* **25**(5), pp. 670-686.

Pryke, S. and Smyth, H. (2006) *The Management of Complex Projects: A Relationship Approach.* Oxford: Blackwell.

Raftery, J., McGeorge, D. and Walters, M. (1997) Breaking up methodological monopolies: a multi-paradigm approach to construction management research. *Construction Management & Economics.* **15**(3), pp. 291-297.

Ramaseshan, B., Rabbanee, F.K. and Tan Hsin Hui, L. (2013) Effects of customer equity drivers on customer loyalty in B2B context. *Journal of Business & Industrial Marketing.* **28**(4), pp. 335-346.

Rameezdeen, R. and Jayasena, E. (2013) Comparing the procurement selection parameters of private and public sector clients. *International Journal of Construction Project Management.* **5**(2), pp. 171-184.

Ranaweera, C. and Prabhu, J. (2003) The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting. *International Journal of Service Industry Management.* **14**(4), pp. 374-395.

Rauyruen, P. and Miller, K.E. (2007) Relationship quality as a predictor of B2B customer loyalty. *Journal of Business Research.* **60**(1), pp. 21-31.

Rauyruen, P., Miller, K.E. and Groth, M. (2009) B2B services: linking service loyalty and brand equity. *Journal of Services Marketing.* **23**(3), pp. 175-186.

Ravitch, S.M. and Riggan, M. (2016) *Reason & Rigor: How Conceptual Frameworks Guide Research.* 2nd ed. Los Angeles: Sage Publications Ltd.

Reddy, S.K. and Czepiel, J.A. (1999) Measuring and modelling the effects of long-term buyer–seller relationships in corporate financial services markets. *Journal of Business Research.* **46**(3), pp. 235-244.

Reichheld, F.F. (1996). *The Loyalty Effect: The Hidden Force behind Growth, Profits and Lasting Value.* Boston, MA: Harvard Business School Press.

Reichheld, F.F. (2003) The one number you need to grow. *Harvard Business Review.* **81**(12), pp. 46-55.

Reichheld, F.F. and Sasser, J., W E. (1990) *Zero defections: quality comes to services*. US: Harvard Business School Press.

Rhodes, C. (2019). Construction industry: statistics and policy. House of Commons Library. [online]. [accessed 19th June 2020]. Available at: <https://commonslibrary. parliament.uk/research-briefings/sn01432/>

Richardson, B. (2005) *Marketing for Architects and Engineers: A New Approach.* London: Taylor & Francis.

RICS (2014). *Benefits of using an RICS chartered surveyor*. [online]. [Accessed on 31st August 2017]. Available at: <https://www.ricsfirms.com /articles/benefits-of-using-an-rics-chartered-surveyor/>

RICS (2017a). Artificial intelligence: What it means for the built environment. [online]. [accessed on 12th January, 2020]. Available at: <https://www.casaportale.com/public/uploads/60853_RICS_Insight_AI_in_the_ built_environment_2017.pdf>

RICS (2017b). *Grenfell tower – action and advice*. [online]. [accessed on 14th November 2017]. Available at: <http://www.rics.org/uk/news/news-insight/news/ grenfell-tower-action-and-advice/>

RICS (2017c). *From student to surveyor.* [online]. [accessed 24th November 2017]. <https://www.rics.org/uk/join/student/from-student-to-surveyor/>

RICS (2017d). *Rules of conduct for firms.* [online]. [accessed 18th November 2017]. Available at: <https://www.rics.org/Global/19633-RICS%20Regulation-Rules%20of% 20Conduct% 20FOR%20FIRMS _updated%2006.06.17.pdf>

RICS (2017e). Ethics and professional standards. [online]. [accessed 4th Nov 2017]. Available at: <https://www.rics.org/uk/regulation1/compliance1/ethics--professional-standards/>

RICS (2019a). Q3 2019: RICS UK Construction and Infrastructure Market Survey. [accessed on 11th December 2019]. <https://www.rics.org/globalassets/rics-website/media/news/press-releases/rics_uk_construction_and_infrastructure_survey_q3-2019.pdf>

RICS (2019b). *Future of the profession. Consultation response report.* [online]. [accessed 23rd September 2019]. Available at: <https://www.rics.org/globalassets/rics-website/media/news/future-of-the-profession-post-consultation-report.pdf>

RICS (2020). RICS 2020 Impact of COVID-19 on UK Property & Construction Market Survey: 22nd May 2020. [online]. [accessed on 6th July 2020]. Available at <https://www.rics.org/uk/news-insight/latest-news/news-opinion/findings-from-rics-2020-impact-of-covid-19-on-uk-property--construction-market-survey/>

RICS (2021). Q4 2020: RICS UK Construction and Infrastructure Monitor. [online]. [accessed on 2nd May 2021]. Available at: <https://www.rics.org/globalassets/rics-website/media/knowledge/research/market-surveys/construction-monitor/q4-2020-uk-rics-construction-and-infrastructure-monitor.pdf>

RIBA (2005). *Code of professional conduct*. [online]. [accessed 18th November 2017]. Available at: <file:///C:/Users/admin/Downloads/CodeofProfessionalConduct GuidanceNotespdf.pdf>

RIBA (2017a). *Architecture's £4.8 billion contribution to UK economy at risk if government botches Brexit*. [online]. [accessed 12th June 2018]. Available at: <https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/architectures-4-8-billion-contribution-to-uk-economy-at-risk-if-government-botches-brexit>

RIBA (2017b). *Ways to quality as an architect*. [online]. [accessed 24th November 2017]. Available at: <https://www.architecture.com/education-cpd-and-careers/how-to-become-an-architect>

RIBA (2017c). *Join the RIBA*. [online]. [Accessed on 31st August 2017). Available at: <https://www.architecture.com/join-riba>.

Ring, P.S. (1996) Fragile and resilient trust and their roles in economic exchange. *Business & Society.* **35**(2), pp. 148-175.

Robinson, M.A. (2018) Using multi-item psychometric scales for research and practice in human resource management: Multi-Item Psychometric Scales. *Human Resource Management.* **57**(3), pp. 739-750.

Rooke, J.A. and Kagioglou, M. (2007) Criteria for evaluating research: the unique adequacy requirement of methods. *Construction Management and Economics.* **25**(9), pp. 979-987.

Rorty, R. (1982) *Consequences of Pragmatism: Essays, 1972-1980.* Minnesota: University of Minnesota Press.

Barbour, R (2007) *Doing Focus Groups.* Los Angeles: Sage Publications Ltd.

Rosenbaum, M.S., Massiah, C. and Jackson, D.W. (2006) An investigation of trust, satisfaction, and commitment on repurchase intentions in professional services. *Services Marketing Quarterly.* **27**(3), pp. 115-135.

Roth, M.S., Money, R.B. and Madden, T.J. (2004) Purchasing processes and characteristics of industrial service buyers in the U.S. and Japan. *Journal of World Business.* **39**(2), pp. 183-198.

Ruddock, L (2016). Introduction and overview. In Ruddock, L. (ed.) *Economics of the Modern Built Environment.* London: Routledge. pp. 1-10.

Runeson, G. (1997) The role of theory in construction management research: comment. *Construction Management and Economics.* **15**(3), pp. 299-302.

Russo, I., Confente, I., Gligor, D.M. and Autry, C.W. (2016) To be or not to be (loyal): Is there a recipe for customer loyalty in the B2B context? *Journal of Business Research.* **69**(2), pp. 888-896.

Rutherford, B.N., Boles, J.S., Barksdale, H.C. and Johnson, J.T. (2008) Buyer's relational desire and number of suppliers used: the relationship between perceived commitment and continuance. *Journal of Marketing Theory and Practice.* **16**(3), pp. 247-257.

Saikala, L. and Selvarani, A. (2015) A Study on work stress among architects and construction professionals in Indian construction industry. *International Journal of Management.* **6**(1), pp. 585-593.

Sarapaivanich, N. and Patterson, P.G. (2015) The role of interpersonal communication in developing small-medium size enterprise (SME) client loyalty toward an audit firm. *International Small Business Journal.* **33**(8), pp. 882-900.

Saunders, M., Lewis, B. and Thornhill, A. (2015). *Research Methods for Business Students*. 7th ed. England. Pearson Education.

Saunders, M, Lewis, B. and Thornhill, A. (2019). *Research Methods for Business Students*. 8th ed. England. Pearson Education.

Sawczuk, B. (2010). *Marketing and Selling Professional Services in Architecture* and Construction. Oxford: John Wiley and Sons.

Schakett, T., Flaschner, A., Gao, T. and El-Ansary, A. (2011) Effects of social bonding in business-to-business relationships. *Journal of Relationship Marketing*. **10**(4), pp. 264-280.

Schertzer, M.B., Schertzer, C.B. and Dwyer, F.R. (2013) Value in professional service relationships. *Journal of Business & Industrial Marketing.* **28**(8), pp. 607-619.

Schmitz, C., Lee, Y. and Lilien, G.L. (2014) Cross-selling performance in complex selling contexts: an examination of supervisory-and compensation-based controls. *Journal of Marketing.* **78**(3), pp. 1-19.

Schneider, B. (1980) The service organization: Climate is crucial. *Organizational Dynamics.* **9**(2), pp. 52-65.

Schneider, D., Berent, M., Thomas, R. and Krosnick, J. (2008) *Measuring customer satisfaction and loyalty: Improving the 'Net-Promoter' score.* [online]. [accessed 12th January, 2019]. Available at:<http.vanhaften.nl/images /documents/pdf/measuring%20customers%20satisfact ion&20and%20loyalty.pdf>

Scotland, J. (2012) Exploring the philosophical underpinnings of research: relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching.* **5**(9), pp. 9-16.

Scott, L.M. and Kanjanabootra, S. (2018) The acquisition of knowledge and expertise in construction: understanding construction professionals. *in* Gorse, C and Nielson., C.J. (eds.) *34th Annual ARCOM Conference* 3-5 September 2018. Belfast. UK. Association of Researchers in Construction Management. pp. 356-345.

Scott, L.M. (2016) Theory and research in construction education: the case for pragmatism. *Construction Management and Economics.* **34**(7-8), pp. 552-560.

Seriki, O and Murphy, R. (2018) Social contagion and knowledge acquisition in construction professional service firms. The Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors, RICS COBRA 2018, 23–24 April 2018. London, UK. COBRA. pp. 4-13.

Seriki, O. and Murphy, R. (2019) Competitive strategies in small and medium sized Enterprises (SMEs): a cross-case analysis of Irish construction professional service firms. *in* Gorse, C and Neilson, C J (eds). *35th Annual ARCOM Conference, 2-4 September 2019,* Leeds, UK, Association of Researchers in Construction Management. pp. 772-781.

Seymour, D., Crook, D. and Rooke, J. (1997) The role of theory in construction management: a call for debate. *Construction Management and Economics.* **15**(1), pp. 117-119.

Seymour, D., Crook, D. and Rooke, J. (1998) The role of theory in construction management: reply to Runeson. *Construction Management and Economics.* **16**(1), pp. 109-112.

Sharma, A. (1997) Professional as agent: knowledge asymmetry in agency exchange. *The Academy of Management Review.* **22**(3), pp. 758-798.

Sharma, N. and Patterson, P.G. (1999) The impact of communication effectiveness and service quality on relationship commitment in consumer, professional services. *Journal of Services Marketing.* **13**(2), pp. 151-170.

Sharma, N. and Patterson, P.G. (2000) Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services. *International Journal of Service Industry Management.* **11**(5), pp. 470-490.

Sharma, N., Young, L. and Wilkinson, I. (2006) The Commitment mix: dimensions of commitment in international trading relationships in India. *Journal of International Marketing.* **14**(3), pp. 64-91.

Sharma, N., Young, L.C. and Wilkinson, I. (2015) The nature and role of different types of commitment in inter-firm relationship cooperation. *Journal of Business & Industrial Marketing.* **30**(1), pp. 45-59.

Shayan, S., Kim, K.P., Ma, T., Freda, R. and Liu, Z. (2019) Emerging challenges and roles for quantity surveyors in the construction industry. *Management Review: An International Journal.* **14**(1), pp. 82-96.

Sheth, J.N. and Parvatiyar, A. (1995) The evolution of relationship marketing. *International Business Review.* **4**(4), pp. 397-418.

Simon, G.L. (2005) The case for non-technical client relationship managers in B2B Professional Services Firms. *Services Marketing Quarterly.* **26**(4), pp. 1-18.

Skjolsvik, T. and Breunig, K.J. (2018) Picking professionals: a client-centric knowledge assessment framework. *Measuring Business Excellence.* **22**(4), pp. 333-345.

Slapnicar, S., Groff, M.Z. and Stumberger, N. (2015) Does professional accounting qualification matter for the provision of accounting services? *Journal of Business Economics and Management.* **16**(4), pp. 753-768.

Smithers, G.L. and Walker, D.H.T. (2000) The effect of the workplace on motivation and demotivation of construction professionals. *Construction Management and Economics.* **18**(7), pp. 833-841.

Smyth, H. (2000) *Marketing and Selling Construction Services.* Oxford: Blackwell Science.

Smyth, H. and Fitch, T. (2009). Application of relationship marketing and management: a large contractor case study. *Construction Management and Economics.* **27**(4), pp.399-410.

Smyth, H., Gustafsson, M. and Ganskau, E. (2010) The value of trust in project business. *International Journal of Project Management.* **28**(2), pp. 117-129.

Snizek, W.E (1972) Hall's Professionalism Scale: An Empirical Reassessment. *American Sociological Review.* **37**(1), pp. 109-114.

Soderlund, M. (2006) Measuring customer loyalty with multi-item scales: A case for caution. *International Journal of Service Industry Management.* **17**(1), pp. 76-98.

Soetanto, R. and Proverbs, D.G. (2004) Intelligent models for predicting levels of client satisfaction. *Journal of Construction Research.* **5**(2), pp. 233-253.

Soetanto, R., Proverbs, D. and Holt, G. (2001) Achieving quality construction projects based on harmonious working relationships: clients' and architects' perceptions of contractor performance. *International Journal of Quality & Reliability Management.* **18**(4), pp. 528.

Spake, D.F., Beatty, S.E., Brockman, B.K. and Crutchfield, T.N. (2003) Consumer comfort in service relationships: measurement and importance. *Journal of Service Research.* **5**(4), pp. 316-332.

Sparks, J.R. and Areni, C.S. (2002) The effects of sales presentation quality and initial perceptions on persuasion: a multiple role perspective. *Journal of Business Research.* **55**(6), pp. 517-528.

Spend Edge (2019). *Construction professional services market procurement research report.* [online]. [accessed 28th January 2020]. Available at: <https://store.spendedge.com/report/construction-professional-services-market-procurement-research-report>

Spreng, R.A., Hui Shi, L. and Page, T.J. (2009) Service quality and satisfaction in business-to-business services. *Journal of Business & Industrial Marketing.* **24**(8), pp. 537-548.

Stockman, C. (2015) Achieving a doctorate through mixed methods research. *Electronic Journal of Business Research Methods.* **13**(2), pp. 74.

Strauss, A.L. (1993) *Qualitative Analysis for Social Scientists.* Cambridge: Cambridge University Press.

Stringfellow, L. (2017). *Networks*. *in* MacLaren, A., Farrington, T. and O'Gorman, K. (eds.) *Marketing Perspectives*. Oxford: Goodfellow Publishers Ltd. pp.151-168.

Suddaby, R. and Greenwood, R. (2005) Rhetorical strategies of legitimacy *Administrative Science Quarterly.* **50**(1), pp. 35-67.

Suddaby, R. and Muzio, D. (2015). Theoretical perspectives on the professionals. *in Empson*, L., Muzio, D. and Broschak, J. (eds). *The Oxford Handbook of Professional Service Firms.* Oxford: Oxford University Press. pp. 25-47.

Sufrin, H., Kirbrandoko, S.B. and Rita, N. (2016) Case study: the influence of customer satisfaction, trust, switching barrier and relationship bond to customer loyalty of professional services company: an empirical study on independent surveyor services industry in Indonesia. *Advances in Management,* **9**(8), pp. 1-6.

Sunindijo, R.Y., Hadikusumo, B.H. and Phangchunun, T. (2014) Modelling service quality in the construction industry. *International Journal of Business Performance Management.* **15**(3), pp. 262-276.

Susanta, A.T., Idrus, M.S. and Nimran, U. (2013) The effect of relationship quality on customer advocacy: The mediating role of loyalty. *Journal of Business and Management.* **12**(4), pp. 41-52.

Sutherland, G. (2015). The importance of client relationship management. *in* Clark, N. (eds.) *Professional Services Marketing Handbook: How to Build Relationships, Grow your Firm and Become a Client Champion*. London: Kogan Page. pp. 148-161.

Sweeney, J.C., Soutar, G.N. and McColl-Kennedy, J.R. (2011) The marketing practices-performance relationship in professional service firms. *Journal of Service Management.* **22**(3), pp. 292-316.

Tashakkori, A. and Creswell, J.W (2007). The new era of mixed methods. *Journal of Mixed Methods Research*. **1**(1). pp. 3-7.

Teddlie, C. and Tashakkori, A. (2003). Controversies in the use of mixed methods in social and behavioural research. *in* Teddlie, C. and Tashakkori, A. (eds). *Handbook of Mixed Methods in Social and Behavioural Research*. London. Sage Publications Ltd. pp. 3-50.

Tehseen, S., Ramayah, T. and Sajilan, S. (2017) Testing and controlling for common method variance: a review of available methods. *Journal of Management Sciences.* **4**(2), pp. 142-168.

Tellefsen, T. (2002) Commitment in business-to-business relationships: The role of organizational and personal needs. *Industrial Marketing Management.* **31**(8), pp. 645-652.

Tellefsen, T. and Thomas, G.P. (2005) The antecedents and consequences of organizational and personal commitment in business service relationships. *Industrial Marketing Management.* **34**(1), pp. 23-37.

Thakor, M.V. and Kumar, A. (2000) What is a professional service? A conceptual review and bi-national investigation. *Journal of Services Marketing.* **14**(1), pp. 63-82.

The Law Society (2020). *After you have qualified.* [online]. [accessed 21st February 2020]. Available at: <https://www.lawsociety.org.uk/law-careers/becoming-a-solicitor/qualifying-with-a-degree/after-you-have-qualified/>

Thibaut, J. and Kelly. H.H. (1959). *The Social Psychology of Groups.* New York. Routledge.

Thomas Sarver, V. (1983) Ajzen and Fishbein's "Theory of Reasoned Action": A Critical Assessment. *Journal for the Theory of Social Behaviour.* **13**(2), pp. 155-164.

Thomas, D.R. (2017) Feedback from research participants: are member checks useful in qualitative research? *Qualitative Research in Psychology.* **14**(1), pp. 23-41.

Toor, S. and Ofori, G. (2008) Developing construction professionals of the 21st century: renewed vision for leadership. *Journal of Professional Issues in Engineering Education and Practice.* **134**(3), pp. 279-286.

Toor, S. and Ogunlana, S.O. (2009) Construction professionals' perception of critical success factors for large-scale construction projects. *Construction Innovation.* **9**(2), pp. 149-167.

Trasorras, R., Weinstein, A. and Abratt, R. (2009) Value, satisfaction, loyalty and retention in professional services. *Marketing Intelligence & Planning.* **27**(5), pp. 615-632.

Treado, M. and Brunswick, G. (2018) Marketing architectural and engineering services: a portfolio approach. *Journal of Service Science*. **11**(1), pp. 11-28.

Trochim, W.M. and Donnelly, J.P. (2006) The Research Methods Knowledge Base. 3rd ed. Cincinnati: Atomic Dog Publishing.

Tucker, W.T (1964). The development of brand loyalty. *Journal of Marketing Research.* **1**(3). pp. 32-35

Tufford, L. and Newman, P. (2012) Bracketing in qualitative research. *Qualitative Social Work.* **11**(1), pp. 80-96.

Ulaga, W. and Eggert, A. (2006) Relationship value and relationship quality. *European Journal of Marketing.* **40**(3), pp. 311-327.

Vafeas, M.G. (2010) Boundary spanner turnover in professional services: exploring the outcomes of client retention strategies. *Journal of Marketing Management*. **26**(9-10), pp. 901-920.

Vafeas, M.G. (2011) Reinventing the role of the professional services boundary spanner: an exploratory study. *Services Marketing Quarterly.* **32**(4), pp. 265-281.

Vargo, S.L. and Lusch, R.F. (2004) Evolving to a new dominant logic for marketing. *Journal of Marketing.* **68**(1), pp. 1-17.

Vargo, S.L. and Lusch, R.F. (2008) Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science.* **36**(1), pp. 1-10.

Vargo, S.L. and Lusch, R.F. (2016) Institutions and axioms: an extension and update of service-dominant logic. *Journal of the Academy of Marketing Science.* **44**(1), pp. 5-23.

Venetis, K.A. and Ghauri, P.N. (2004) Service quality and customer retention: building long-term relationships. *European Journal of Marketing.* **38**(11/12), pp. 1577-1598.

Von Nordenflycht, A. (2010) What Is a professional service firm? Toward a theory and taxonomy of knowledge-intensive firms. *The Academy of Management Review.* **35**(1), pp. 155-174.

Von Nordenflycht, A., Malhotra, N. and Morris, T. (2015) Sources of homogeneity and heterogeneity across professional services. p.135-160. *in* Empson, L., Muzio, D. and Broschak, J. (eds.) *The Oxford Handbook of Professional Service Firms.* Oxford: Oxford University Press. pp. 135-160.

Wagner, K.D., Davidson, P.J., Pollini, R.A., Strathdee, S.A., Washburn, R. and Palinkas, L.A. (2012) Reconciling incongruous qualitative and quantitative findings in mixed methods research: exemplars from research with drug using populations. *International Journal of Drug Policy.* **23**(1), pp. 54-61.

Walsh, K. and Gordon, J.R. (2010) Understanding professional service delivery. *International Journal of Quality and Service Sciences.* **2**(2), pp. 217-238.

Wathne, K.H., Biong, H. and Heide, J.B. (2001) Choice of supplier in embedded markets: relationship and marketing program effects. *Journal of Marketing.* **65**(2), pp. 54-66.

Watson. G.F., Beck, J.T., Henderson, C.M. and Palmatier, R.W. (2015) Building, measuring, and profiting from customer loyalty. *Journal of the Academy of Marketing Science.* **43**(6), pp. 790-825.

Watt, D.J., Kayis, B. and Willey, K. (2009) Identifying key factors in the evaluation of tenders for projects and services. *International Journal of Project Management.* **27**(3), pp. 250-260.

Wetzels, M., de Ruyter, K. and van Birgelen, M. (1998) Marketing service relationships: the role of commitment. *Journal of Business & Industrial Marketing.* **13**(4/5), pp. 406-423.

Williams, B., Onsman, A. and Brown, T. (2010) Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine.* **8**(3), pp 1-13.

Williams, M. and Buttle, F. (2011) The Eight Pillars of WOM management: lessons from a multiple case study. *Australasian Marketing Journal.* **19**(2), pp. 85-92.

Williams, P., Khan, M.S., Ashill, N.J. and Naumann, E. (2011) Customer attitudes of stayers and defectors in B2B services: are they really different? *Industrial Marketing Management.* **40**(5), pp. 805-815.

Williamson, O.E. (1975) *Markets and Hierarchies: Analysis and Antitrust Implications.* New York: The Free Press.

Wilson, D.T. (1995) An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science.* **23**(4), pp. 335-345.

Winch, G. (1989) The construction firm and the construction project: a transaction cost approach. *Construction Management and Economics.* **7**(4), pp. 331-345.

Womer, S. (1944) Some applications of the continuous consumer Panel. *Journal of Marketing.* **9**(2), pp. 132-136.

Woo, K. and Ennew, C.T. (2004) Business-to-business relationship quality: An IMP interaction-based conceptualization and measurement. *European Journal of Marketing.* **38**(9/10), pp. 1252-1271.

Woo, K. and Ennew, C.T. (2005) Measuring business-to-business professional service quality and its consequences. *Journal of Business Research.* **58**(9), pp. 1178-1185.

Wu, L., Chen, P. and Chen, K. (2015) Why does loyalty–cooperation behaviour vary over buyer–seller relationship? *Journal of Business Research.* **68**(11), pp. 2322-2329.

Yankah, J.E. (2015) Marketing performance of quantity surveying consultancy Firms. *International Journal of Construction Engineering and Management.* **4**(6), pp. 230-237.

Ye, K., Lu, W., Jewell, C. and Flanagan, R. (2014) Nexus between contracting and construction professional service businesses: empirical evidence from international market. *Journal of Construction Engineering and Management.* **140**(2), pp. 04013049-1- 04013049-9.

Yeh, C., Wang, Y. and Yieh, K. (2016) Predicting smartphone brand loyalty: Consumer value and consumer-brand identification perspectives. *International Journal of Information Management.* **36**(3), pp. 245-257.

Yi, Y. (1990) A critical review of consumer satisfaction. *Review of Marketing.* **4**(1), pp. 68-123.

Yisa, S.B., Ndekugri, I. and Ambrose, B. (1996) A review of changes in the UK construction industry: their implications for the marketing of construction services. *European Journal of Marketing.* **30**(3), pp. 47-64.

Young, L. and Denize, S. (1995) A concept of commitment: alternative views of relational continuity in business service relationships. *Journal of Business & Industrial Marketing*. **10**(5), pp. 22-37.

Zaki, M., Kandeil, D., Neely, A. and McColl-Kennedy, J.R. (2016) The fallacy of the net promoter score: customer loyalty predictive model. *Cambridge Service Alliance.* **10**, pp. 1-25.

Zardkoohi, A., Bierman, L., Panina, D. and Chakrabarty, S. (2011) Revisiting a proposed definition of professional service firms. *Academy of Management Review.* **36**(1), pp. 180-184.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1988) Communication and control processes in the delivery of service quality. *Journal of Marketing.* **52**(2), pp. 35-48.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996) The behavioral consequences of service quality. *Journal of Marketing.* **60**(2), pp. 31-46.

Zimmerman, A. and Blythe, J. (2013) *Business to Business Marketing Management: A Global Perspective.* 2nd ed. Oxon: Routledge.

Zolkiewski, J., Lewis, B., Yuan, F. and Yuan, J. (2007) An assessment of customer service in business-to-business relationships. *Journal of Services Marketing.* **21**(5), pp. 313-325.

Zou, P.X.W., Sunindijo, R.Y. and Dainty, A.R.J. (2014) A mixed methods research design for bridging the gap between research and practice in construction safety. *Safety Science,* **70,** pp. 316-326.

Bibliography

Abbot, A. (1988) *The system of Professions.* Chicago: University of Chicago Press.

Abbott, A. (2004) *Methods of Discovery: Heuristics for the Social Sciences*. London: Norton and Co.

Adam, F. (2014) *Measuring National Innovation Performance: The Innovation Union Scoreboard Revisited.* Berlin: Springer.

Aliyu, A.A., Bello, M.U., Kasim, R. and Martin, D. (2014) Positivist and non-positivist paradigm in social science research: Conflicting paradigms or perfect partners. *Journal of Management and Sustainability.* **4**(3)**,** pp. 79-95

Allen, N.J. and Meyer, J.P. (1996) Affective, continuance, and normative commitment to the organization: an examination of construct validity. *Journal of Vocational Behaviour.* **9**(3), pp. 252-276.

Anderson, J.C., Narus, J.A. and Narayandas, D. (2009) *Business Market Management: Understanding, Creating and Delivering Value.* 3rd ed. New Jersey: Pearson Prentice Hall.

Anderson-Gough, F., Grey, C. and Robson, K. (2001) Tests of time: organizational time-reckoning and the making of accountants in two multi-national accounting firms. *Accounting, Organizations and Society.* **26**(2), pp. 99-122.

Ankrah, N.I. (2007). An investigation into the impact of culture on construction project performance. PhD thesis. University of Wolverhampton.

Auh, S., Bell, S.J., McLeod, C.S. and Shih, E. (2007) Co-production and customer loyalty in financial services. *Journal of Retailing.* **83**(3), pp. 359-370.

Barton, S.G. (1946). The movement of branded goods to the consumer. i*n* Blankenship, A. D. (ed.) *How to Conduct Consumer and Opinion Research.* New York: Harper and Bros. pp. 58-70.

Beach, R., Webster, M. and Campbell, K.M. (2005) An evaluation of partnership development in the construction industry. *International Journal of Project Management.* **23**(8), pp. 611-621.

Bejou, D. (1997) Relationship marketing: evolution, present state, and future. *Psychology and Marketing.* **14**(8), pp. 727-735.

Blut, M., Evanschitzky, H., Backhaus, C., Rudd, J. and Marck, M. (2016) Securing business-to-business relationships: The impact of switching costs. *Industrial Marketing Management.* **52,** pp. 82-90.

Bor, R. and Watts, M. (2016) *The Trainee Handbook: A Guide for Counselling & Psychotherapy Trainees.* London: Sage Publications Ltd.

Borden, N.H. (1964) The concept of the marketing mix. *Journal of Advertising Research.* **4**(2), pp. 2-7.

Bove, L.L. and Johnson, L.W. (2002) Predicting personal loyalty to a service worker. *Australasian Marketing Journal.* **10**(1), pp. 24-35.

Brown, J.R., Crosno, J.L. and Tong, P.Y. (2018) Is the theory of trust and commitment in marketing relationships incomplete? *Industrial Marketing Management.* **77.** pp.155-169.

Brown, R.B. (1996) Organizational commitment: clarifying the concept and simplifying the existing construct typology. *Journal of Vocational Behaviour.* **49**(3), pp. 230-251.

Brunswick, G. (2018) Marketing architectural and engineering services: a portfolio approach. *Journal of Service Science.* **11**(1), pp. 11-28.

Burnham, T.A., Frels, J.K. and Mahajan, V. (2003) Consumer switching costs: A typology, antecedents, and consequences. *Journal of the Academy of Marketing Science.* **31**(2), pp. 109-126.

Cameron, R. and Miller, P. (2007) Mixed methods research: phoenix of the paradigm wars. *In* Chapman, R. (eds.) Managing our Intellectual and Social Capital: Proceedings of the 21st ANZAM Conference, 4-7 December 2007. Sydney, New South Wales. pp. 1-15.

Chenail, R.J. (2011) Ten steps for conceptualizing and conducting qualitative research studies in a pragmatically curious manner. *The Qualitative Report.* **16**(6), pp. 1713-1730.

Cherryholmes, C.H. (1992) Notes on pragmatism and scientific realism. *Educational Researcher.* **21**(6), pp. 13-17.

Cherryholmes, C.H. (1994) More notes on pragmatism. *Educational Researcher.* **23**(1), pp. 16-18.

Creswell, J.W., Tashakkori, A., Jensen, K.D. and Shapley, K.L., (2003) Teaching mixed methods research: practices, dilemmas, and challenges. *in* Teddlie, C. and Tashakkori, A. (eds.) *Handbook of Mixed Methods in Social and Behavioural Research.* London: Sage Publications Ltd. pp. 619-637.

Dainty, A.R., Bagilhole, B.M. and Neale, R.H., (1998) Improving the retention of construction professionals: a soft HRM approach. *14th Annual ARCOM Conference.* University of Reading. 9-11th September 1998. Association of Researchers in Construction Management. pp. 9-11.

De Forge, R. and Shaw, J. (2012) Back- and fore-grounding ontology: exploring the linkages between critical realism, pragmatism, and methodologies in health & rehabilitation sciences: *Nursing Inquiry.* **19**(1), pp. 83-95.

Denicolo, P. (2014) *Achieving Impact in Research.* Los Angeles: Sage Publications Ltd.

Drennan, J. and McColl-Kennedy, J.R. (2003) The relationship between Internet use and perceived performance in retail and professional service firms. *Journal of Services Marketing.* **17**(3), pp. 295-311.

Du Toit, J.L. and Mouton, J. (2013) A typology of designs for social research in the built environment. *International Journal of Social Research Methodology.* **16**(2), pp. 125-139.

Duncan, E.A. and Nicol, M.M. (2004) Subtle realism and occupational therapy: an alternative approach to knowledge generation and evaluation. *British Journal of Occupational Therapy.* **67**(10), pp. 453-456.

Edwards, D.J. and Holt, G.D. (2010) The case for "3D triangulation" when applied to construction management research. *Construction Innovation***. 10**(1), pp. 25-41.

Elbow, P. (1973) Appendix essay. The doubting game and the believing game: an analysis of the intellectual process. *Writing Without Teachers.* pp. 147-191

Ennew, C. (2004) Business-to-business relationship quality: an IMP interaction-based conceptualization and measurement. *European Journal of Marketing.* **38**(9), pp. 1252-1271.

Farrell, A.M. (2010) Insufficient discriminant validity: a comment on Bove, Pervan, Beatty, and Shiu (2009). *Journal of Business Research.* **63**(3), pp. 324-327.

Fereday, J. and Muir-Cochrane, E. (2006) Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods.* **5**(1), pp. 80-92.

Fetters, M.D., Curry, L.A. and Creswell, J.W. (2013) Achieving integration in mixed methods designs—principles and practices. *Health Services Research.* **48**(6), pp. 2134-2156.

Fombrun, C. and Shanley, M. (1990) What's in a name? Reputation building and corporate strategy. *The Academy of Management Journal.* **33**(2), pp. 233-258.

Fox, N.J. (2008). *Post-positivism. in* Given, L.M. (ed.) (2008). *The Sage Encyclopaedia of Qualitative Research Methods.* London: Sage Publications Ltd., pp. 659-664.

Garrison, J.W. (1986) Some principles of post-positivistic philosophy of science. *Educational Researcher.* **15**(9), pp. 12-18.

Giddings, L.S. (2006) Mixed-methods research: Positivism dressed in drag? *Journal of Research in Nursing.* **11**(3), pp. 195-203.

Goldring, D. (2010) Commitment variation in the phases of the relationship development process. *Journal of Relationship Marketing.* **9**(4), pp. 229-246.

Gil-Saura, I., Berenguer-Contri, G. and Ruiz-Molina, E. (2018) Satisfaction and loyalty in B2B relationships in the freight forwarding industry: adding perceived value and service quality into equation. *Transport.* **33**(5), pp. 1184-1195.

Gil-Saura, I., Frasquet-Deltoro, M. and Cervera-Taulet, A. (2009) The value of B2B relationships. *Industrial Management & Data Systems.* **109**(5), pp. 593-609.

Goldring, D. (2010) Commitment variation in the phases of the relationship development process. *Journal of Relationship Marketing.* **9**(4), pp. 229-246.

Green, S.D., Kao, C. and Larsen, G.D. (2010) Contextualist research: iterating between methods while following an empirically grounded approach. *Journal of Construction Engineering and Management.* **136**(1), pp. 117-126.

Goulding, C. (2002). *Grounded Theory: A Practical Guide for Management, Business and Market Researchers*. London: Sage Publications Ltd.

Goulding, C. (2005) Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing.* **39**(3/4), pp. 294-308.

Gupta, S., Lehmann, D.R. and Stuart, J.A. (2004) Valuing customers. *Journal of Marketing Research.* **41**(1), pp. 7-18.

Hamati-Ataya, I. (2012) Beyond (post)positivism: the missed promises of systemic pragmatism. *International Studies Quarterly.* **56**(2), pp. 291-305.

Hannan, S., Suharjo, B. and Nurmalina, R. (2016). The influence of customer satisfaction, trust and information sharing on customer loyalty of professional services company: An empirical study on independent surveyor services industry in Indonesia. Abstract of Economic, Finance and Management Outlook. 5. pp.1-9.

Helm, S. (2007) One reputation or many? Comparing stakeholders' perceptions of corporate reputation. *Corporate Communications.* **12**(3), pp. 238-254.

Henderson, K.A. (2011) Post-positivism and the pragmatics of leisure research. *Leisure Sciences.* **33**(4), pp. 341-346.

Idrees, I., Vasconcelos, A.C. and Cox, A.M. (2011) The use of grounded theory in PhD research in knowledge management: a model four-stage research design. *New Information Perspectives.* **63**(2/3), pp. 188-203.

Johnson, R.B., Onwuegbuzie, A.J. and Turner, L.A. (2007) Toward a definition of mixed methods research. *Journal of Mixed Methods Research.* **1**(2), pp. 112-133.

Johnson, T. (1972) Imperialism and the professions: notes on the development of professional occupations in Britain's colonies and the new states. *The Sociological Review.* **20**(1). pp. 281-309.

Karantinou, K.M. and Hogg, M.K. (2001) Exploring relationship management in professional services: a study of management consultancy. *Journal of Marketing Management***, 17**(3-4), pp. 263-286.

Kingshott, R.P.J. and Pecotich, A. (2007) The impact of psychological contracts on trust and commitment in supplier-distributor relationships. *European Journal of Marketing.* **41**(9/10), pp. 1053-1072.

Kinnie, N. and Swart, J. (2012) Committed to whom? Professional knowledge worker commitment in cross-boundary organisations: Professional knowledge worker commitment. *Human Resource Management Journal.* **22**(1), pp. 21-38.

Kuhn, T.S. (2012) *The Structure of Scientific Revolutions.* 4th ed. Chicago. London: University of Chicago Press.

Kumar, P. (2002) The Impact of performance, cost, and competitive considerations on the relationship between satisfaction and repurchase intent in business markets. *Journal of Service Research.* **5**(1), pp. 55-68.

Kumar, V., Pozza, I.D. and Ganesh, J. (2013) Revisiting the satisfaction-loyalty relationship: empirical generalizations and directions for future research. *Journal of Retailing.* **89**(3), pp. 246.

Legislation.gov.uk. [no date]. *Bribery Act 2010* [online]. [accessed 04th November 2017]. Available at: <https://www.legislation.gov.uk/ukpga/2010/23/contents>

Legislation.gov.uk. [no date]. *Prevention of Corruption Act 1906 (repealed).* [online]. [accessed on 04th November 2017]. Available at: <https://www.legislation.gov.uk/ ukpga/Edw7/6/34>

Letourneau, N. and Allen, M. (1999) Post-positivistic critical multiplism: a beginning dialogue. *Journal of Advanced Nursing.* **30**(3), pp. 623-630.

Ling, Y.Y. (2003) A conceptual model for selection of architects by project managers in Singapore. *International Journal of Project Management.* **21**(2), pp. 135-144.

Lipscomb, M. (2008) Mixed method nursing studies: a critical realist critique. *Nursing Philosophy.* **9**(1), pp. 32-45.

Lowendahl, B.R., Revang, O. and Fosstenlokken, S.M. (2001) Knowledge and value creation in professional service firms: a framework for analysis. *Human Relations.* **54**(7), pp. 911-931.

O'Reilly, K., Paper, D. and Marx, S. (2012) Demystifying grounded theory for business research. *Organizational Research Methods.* **15**(2), pp. 247-262.

Machi, L.A. and McEvoy, B.T. (2016) *The literature review: six steps to success.* 3rd ed. Thousand Oaks, California: Corwin Press.

Malhotra, N., Morris, T. and Hinings, C.R. (2006). Variation in organizational form among professional service organizations. *Research in the Sociology of Organizations.* **24**(6), 171-220.

Maxwell, J.A. (2011) Paradigms or toolkits? Philosophical and methodological positions as heuristics for mixed methods Research. *Mid-Western Educational Researcher.* **24**(2), pp. 27-30.

Mbachu, J. and Nkado, R. (2006) Conceptual framework for assessment of client needs and satisfaction in the building development process. *Construction Management and Economics.* **24**(1), pp. 31-44.

McEvoy, P. and Richards, D. (2006) A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal of Research in Nursing.* **11**(1), pp. 66-78.

McLean, B. and Elkind, P. (2013). *The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron.* New York: Penguin.

Mertens, D.M. (2007) Transformative paradigm: Mixed methods and social justice. *Journal of Mixed Methods Research.* **1**(3), pp. 212-225.

Mertens, D.M. and Hesse-Biber, S. (2013) Mixed methods and credibility of evidence in evaluation. *New Directions for Evaluation.* **138**, pp. 5-13.

Midgley, W. and Patrlan Danahnd, M.B. (2013) *The role of participants in education research: ethics, epistemologies, and methods.* London: Routledge Ltd.

Mingers, J. (2001) Combining is research methods: towards a pluralist methodology. *Information Systems Research.* **12**(3), pp. 240-259.

Mingers, J. and Brocklesby, J. (1997) Multimethodology: towards a framework for mixing methodologies. *Omega* **25**(5), pp. 489-509.

Mirko., P and Abatte., T. (2018). Service dominant logic, open innovation intermediaries and innovative capacities: towards a theoretical framework. *International Journal of Business and Management.* **1**(10). pp. 146-160.

Mitchell, V. and Greatorex, M. (1993) Risk perception and reduction in the purchase of consumer services. *The Service Industries Journal.* **13**(4), pp. 179-200.

Morgan, D.L. (2019). Do we have to include independent, dependent, and mediating variables simultaneously to run exploratory factor analysis in SPSS? [online]. [accessed on 19th September 2019]. Available at: <https://www.researchgate.net/-post/Do_we_have_to_include_independent_dependent_and_mediating_variables_simultaneously_to_run_exploratory_factor_analysis_in_SPSS>

NAEA. (2018). *Qualifications in residential sales.* [online]. [accessed 18th December 2018]. Available at: <http://www.naea.co.uk/training-qualifications/qualifications/>

Namukasa, J. (2013) The influence of airline service quality on passenger satisfaction and loyalty: The case of Uganda airline industry. *The TQM Journal.* **25**(5), pp. 520-532.

Oakshott, L. (2016) *Essential Quantitative Methods for Business, Management and Finance.* 6th ed. Basingstoke, Hampshire: Palgrave Macmillan.

Patry, J. (2013) Beyond multiple methods: Critical multiplism on all levels. *International Journal of Multiple Research Approaches.* **7**(1), pp. 50-65.

Palmatier, R.W., Scheer, L.K., Evans, K.R. and Arnold, T.J. (2008) Achieving relationship marketing effectiveness in business-to-business exchanges. *Journal of the Academy of Marketing Science.* **36**(2), pp. 174-190.

Peck, H., Christopher, M., Clark, M. and Payne, A. (2013). *Relationship Marketing*. Oxford: Taylor & Francis.

Pressman, A. (1995) *The Fountain Headache: The Politics of Architect-Client Relations.* New York: John Wiley & Sons.

Ravald, A. and Gronroos, C. (1996) The value concept and relationship marketing. *European Journal of Marketing.* **30**(2), pp. 19-30.

Reichheld, F. (2006). *The Ultimate Question. Driving Good Profits and True Growth*. Boston: Harvard Business School Press.

Reihlen, M. and Werr, A. (2012) *Handbook of Research on Entrepreneurship in Professional Services.* Cheltenham: Edward Elgar Publishing.

Rindfleisch, A. and Antia, K.D. (2012) Survey research in B2B marketing: current challenges and emerging opportunities. Lilien, G.L., and Grewal, R. (eds.) *Handbook of Business to Business Marketing.* Cheltenham: Edward Elgar Publishing. pp. 699-730.

Rorty, R. (1980) *Philosophy and the Mirror of Nature.* Oxford: Blackwell.

Rorty, R. (1999) *Philosophy and Social Hope.* London: Penguin.

Rosenthal, R. and Rosnow, R.L. (2008) *Essentials of Behavioral Research: Methods and Data Analysis.* New York: McGraw Hill.

Ross. M. (2017). *The advantages and disadvantages of mixed methodology research.* [Online]. [accessed 7th May 2017]. Available at: <http://penandthepad.com/-advantages-disadvantages-mixed-methodology-research-4263.html>

Rubin, D.K. (2011). Design-firm CFO's relate post-recession strategies. *Engineering-News Record.* **266**(12). pp 18-18.

Rubin, H.J. and Rubin, I. (2005) *Qualitative Interviewing: The Art of Hearing Data.* 2nd ed. London: Sage Publications Ltd.

Rundle-Thiele, S. (2005) Exploring loyal qualities: assessing survey-based loyalty measures. *Journal of Services Marketing.* **19**(7), pp. 492-500.

QSR International (2018). *NVivo 11 Pro Getting Started Guide - QSR International* 14/03/18-lastupdate. [online]. [Accessed 18th March 2018]. Available at:< http://download.qsrinternational.com/Document/NVivo11/11.3.0/en-US/NVivo11-Getting-Started-Guide-Pro-edition.pdf >

Saad, M., Jones, M. and James, P. (2002) A review of the progress towards the adoption of supply chain management (SCM) relationships in construction. *European Journal of Purchasing and Supply Management.* **8**(3), pp. 173-183.

Scheer, L.K., Miao, C.F. and Garrett, J. (2010) The effects of supplier capabilities on industrial customers' loyalty: the role of dependence. *Journal of the Academy of Marketing Science.* **38**(1), pp. 90-104.

Shankar, V., Smith, A.K. and Rangaswamy, A. (2003) Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing.* **20**(2), pp. 153-175.

Shannon-Baker, P. (2016) Making paradigms meaningful in mixed methods research. *Journal of Mixed Methods Research.* **10**(4), pp. 319-334.

Sharma, D.D. (1994) Classifying buyers to gain marketing insight: a relationships approach to professional services. *International Business Review.* **3**(1), pp. 15-30.

Silver, C. and Lewins, A. (2014) *Using Software in Qualitative Research: A Step-by-Step Guide.* 2nd ed. London: Sage Publications Ltd.

Srnka, K.J. and Koeszegi, S.T. (2007) From words to numbers: how to transform qualitative data into meaningful quantitative results. *Schmalenbach Business Review.* **8**(1), pp. 29-57.

Smets, M., Morris, T. and Greenwood, R. (2012) From practice to field: a multilevel model of practice-driven institutional change. *Academy of Management Journal.* **55**(4), pp. 877-904.

Sullivan, G.M., Artino, J. and Anthony, R. (2013) Analyzing and interpreting data from Likert-type scales. *Journal of Graduate Medical Education.* **5**(4), pp. 541-542.

Talisse, R.B. and Aikin, S.F. (2008) *Pragmatism: A Guide for the Perplexed.* London: Continuum International Publishing Group Ltd.

Tashakkori, A. and Teddlie, C. (2010). *Sage Handbook of Mixed Methods in Social & Behavioural Research*. 2nd Ed. London: Sage Publications Ltd.

Theron, E., Terblanche, N.S. and Boshoff, C. (2008) The antecedents of relationship commitment in the management of relationships in business-to-business (B2B) financial services. *Journal of Marketing Management.* **24**(9-10), pp. 997-1010.

Trafford, V. and Leshem, S. (2008) *Stepping Stones to Achieving your Doctorate.* Maidenhead: Open University Press.

UKCES (2017). *Professional and business services sector report.* [online]. [accessed 19th July 2018]. Available at:

<https://www.parliament.uk/documents/commons-committees/Exiting-the-European-Union/17-19/Sectoral%20Analyses/28-Professional-and-Business-Services-Report%20.pdf>

Umashankar, N., Bhagwat, Y. and Kumar, V. (2017) Do loyal customers really pay more for services? *Journal of the Academy of Marketing Science.* **45**(6), pp. 807-826.

University of Wolverhampton. (2014). Handbook for Ethical Approval & Practical Procedures [online]. [accessed 2nd January 2018]. Available at: <https://www.wlv.ac.uk/media/ departments/research/documents/Handbook-for-Ethical-Approval-&-Practice-Procedures.pdf>

University of Wolverhampton. (2019). Handbook for Ethical Approval & Practical Procedures [online]. [accessed 22nd May 2019]. Available at: <https://www.wlv.ac.uk/media/departments/research/documents/Handbook-for-Ethical-Approval-&-Practice-Procedures.pdf>

Vision Edge Marketing (2017). *Loyalty vs retention and best practise for measuring loyalty.* [online]. [accessed 25th Sept 2017]. Available at: <https://visionedgemarketing.com/loyalty-vs-retention-and-best-practices-for-measuring-loyalty/>

Volker, L. (2010) *Deciding about Design Quality: Value Judgements and Decision Making in the Selection of Architects by fublic Clients under European Tendering Regulations.* Leiden: Sidestone Press.

Watts, J.H. (2007) Porn, pride and pessimism: experiences of women working in professional construction roles. *Work, Employment & Society.* **21**(2), pp. 299-316.

Westen, D. and Rosenthal, R. (2003) Quantifying construct validity: two simple measures. *Journal of Personality and Social Psychology.* **84**(3), pp. 608.

Woo, K.M. and Leelapanyalert, K. (2014) Client relationship marketing practices: an exploratory study of the legal industry. *Journal of Relationship Marketing.* **13**(4), pp. 286-317.

Xiong, B., Skitmore, M. and Xia, B. (2015) A critical review of structural equation modeling applications in construction research. *Automation in Construction.* **49,** pp. 59-70.

Zarkada-Fraser, A. (2000) A classification of factors influencing participating in collusive tendering agreements. *Journal of Business Ethics.* 23(3), pp. 269-282.

Appendix A. Sources used for analysis of CPS literature

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
✓	✓	✓				✓		QUANT	Quality management	UK	No	Yes. CPS studied as a single group.	Abdul-Rahman (1996)
✓	✓	✓		✓				QUANT	Ethics	Nigeria	Yes. Professions studied separately as well as CPS collectively.	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Adeyinka *et al.,* (2014)
✓				✓				QUANT	Motivation and performance	Turkey	Yes. Professions studied separately as well as CPS collectively	No. Differences were identified	Akiner & Tijhuis (2007)
	✓							QUANT	Ethics	Nigeria	NA (single sub-disciple)	NA (single sub-disciple)	Akinrata (2019)
	✓							QUANT	Quality management	Nigeria	NA (single sub-disciple)	NA (single sub-disciple)	Akinsiku (2016)
CPS (sub-discipline not specified)								Conceptual review	Education and training	General (global)	No	Yes.	Becker, Jaselskis, and McDermott (2011)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
✓	✓			✓				QUANT	Ethics	South Africa	Yes	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Bowen *et al.,* (2007)
✓	✓			✓		✓		QUANT	Work-related stress	South Africa	Yes	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Bowen Edwards and Lingard (2013)
✓	✓	✓		✓			✓	Qual-QUANT	Work-related stress	South Africa	Yes	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Bowen *et al.,* (2014)
✓		✓		✓				QUANT	Personal characteristics	USA	Yes	Yes	Carr, Garza *et al.,* (2002)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
✓	✓	✓		✓			✓	QUANT	Personal characteristics	Australia, Hong Kong, Singapore, UK	Yes	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Chan, Chan and Scott (2007)
CPS (sub-discipline not specified)								QUANT	Work-related stress	Hong-Kong	No	Yes	Chan, Leung and Yuan (2014)
✓	✓	✓	✓	✓	✓	✓	✓	Conceptual review	Economics & business strategy	UK	NA	Yes	Connaughton and Meikle (2013)
✓	✓	✓		✓			✓	QUANT	Education and training	Hong Kong	No	Yes	Chan *et al.,* (2002)
	✓			✓		✓		QUANT-QUAL	Quality management	UK	Yes	Yes	Cheng, Proverbs and Odouza (2006)
		✓		✓		✓		QUANT	Project management	Taiwan, Indonesia, Vietnam	No	Yes	Chou, Irawan, and Pham (2013)
CPS (sub-discipline not specified)								QUANT-QUAL	Economics & business strategy	UK	No	Yes	Connaughton *et al.,* (2015)
✓	✓			✓				QUAL	Human resource management	Tanzania	Yes	No. Differences were identified.	Debrah and Ofori (2006)
CPS (sub-discipline not specified)								QUAL	Human resource management	UK	No	Yes	Dainty, Bagilhole, and Neale (1998)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
CPS referred to as construction consultants (sub-discipline not specified)								QUANT	Service quality	Nigeria	No	Yes	Dosumu and DAigbavboa (2019)
✓		✓			✓			QUANT	Ethics	Hong Kong	No	Yes	Fan & Fox (2009)
	✓							Conceptual review	Knowledge management	Hong Kong	NA	NA (single sub-disciple)	Fong and Choi (2009)
✓				✓				QUANT	Personality characteristics	Turkey	Yes	No. Differences were identified.	Giritl and Civan (2008)
✓				✓				QUANT	Personality characteristics	Turkey	Yes.	No. Differences were identified.	Graham (2010)
✓		✓		✓				QUANT	Diversity and culture	UK and globally	No	Yes	Hall and Jaggar (1998)
✓		✓	✓		✓			QUAL	Health safety and environment	UK	Yes	Yes.	Higham,and Thomson (2015)
							✓	QUANT	Marketing	UK	NA (single sub-disciple)	NA (single sub-disciple)	Hoxley (1995)
✓	✓	✓					✓	QUANT	Quality management	UK	No	Yes	Hoxley (2000a)
✓	✓	✓		✓				QUANT	Quality management	UK	No	Yes	Hoxley (2000b)
✓	✓	✓		✓				QUANT	Quality management	UK	No	Yes	Hoxley (2001)
RICS members (sub-discipline not specified)								QUANT	Quality management	UK	No	Yes	Hoxley (2007)
✓	✓			✓				QUANT	Knowledge management	Nigeria	No (excepting descriptive statistics)	Yes	Ibrahim *et al.,* (2019)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
				✓				QUANT	Knowledge management	Malaysia	NA (single sub-disciple)	NA (single sub-disciple)	Izwan, Sayuti *et al., (*2019)
				✓				QUANT	Marketing	Malaysia	NA (single sub-disciple)	NA (single sub-disciple)	Jaafar, Aziz *et al., (*2008)
✓	✓	✓	✓	✓	✓	✓	✓	QUAL	Economics & business strategy	UK	No	Yes	Jewell, Flanagan, and Anac (2010)
✓	✓	✓	✓	✓	✓	✓	✓	QUAL	Economics & business strategy	UK and globally	No	Yes	Jewell, and Flanagan (2012)
CPS (sub-discipline not specified)								QUAL	Economics & business strategy	UK	No	Yes	Jewell, Flanagan and Lu (2014)
CPS (sub-discipline not specified)								QUAL	Economics & business strategy	UK	No	Yes	Kissi, Dainty, and Liu (2012)
CPS (sub-discipline not specified)								QUAL	Diversity and culture	UK	No	Yes	Kivrak, Ross and Arslan (2008)
✓	✓	✓	✓	✓		✓		QUANT	Motivation and performance	Hong Kong	No	Yes	Leung, Chen and Yu (2008)
✓				✓				QUANT-QUAL	Health and safety and environment	Australia	Yes	Inter-profession study	Lingard, *et al.,* (2015)
✓								QUAL	Economics & business strategy	UK	NA (single sub-disciple)	NA (single sub-disciple)	Lu & Sexton (2006)
CPS (sub-discipline not specified)								QUAL	Economics & business strategy	China	No	Yes	Lu *et al.,* (2013)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
CPS (sub-discipline not specified)								QUAL	Economics & business strategy	Global	No	Yes	Lu, Flanagan and Jewell (2013)
				✓				QUANT	Marketing	UK	NA (single sub-disciple)	NA (single sub-disciple)	Morgan and Morgan (1991)
✓	✓			✓				QUANT	Education and training	Malaysia	No	Yes	Mohamad *et al.,* (2015)
✓	✓	✓						QUAL	Motivation and performance	UK	No	Yes.	Mohyin, Dainty and Carrillo (2009)
✓	✓	✓	✓	✓	✓	✓	✓	QUAL	Human resource management	UK	No	Yes	Mohyin, Dainty and Carrillo (2012)
	✓							QUAL	Economics & business strategy	UK	NA (single sub-disciple)	NA (single sub-disciple)	Murphy (2016)
CPS (sub-discipline not specified)								QUAL-QUANT	Economics & business strategy	None stated	No	Yes	Murphy & Henderson (2013)
✓	✓	✓	✓	✓			✓	QUANT	Leadership	Nigeria	No	Yes	Odusami (2002)
✓	✓			✓				QUANT	Leadership	Nigeria	Yes	No	Oke (2013)
✓	✓			✓				QUANT	Marketing	Nigeria	No	Yes	Ojo (2011)
✓	✓			✓				QUANT	Team and project roles	Nigeria	Yes	No	Olatunji and Oke (2014)
✓								QUANT	Economics & business strategy	Nigeria	NA (single sub-disciple)	NA (single sub-disciple)	Oluwatayo and Amole (2011)
✓	✓		✓					QUANT	Motivation and performance	Nigeria	No	Yes	Onukwube and Lyagba (2011)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
✓				✓				Qual-QUANT	Motivation and performance	Northern Ireland	No.	Yes.	Oyedele (2010)
	✓			✓				QUANT	Team and project roles	Nigeria	Yes	No.	Owolabi, and Olatunji (2014)
		✓						QUANT	Economics & business strategy	Nigeria	NA (single sub-disciple)	NA (single sub-disciple)	Peter, Eze and Anthony (2019)
✓								QUAL-QUANT	Quality management	India	NA (single sub-disciple)	NA (single sub-disciple)	Prakash, and Phadtare (2018)
	✓							Conceptual review	Marketing	UK	NA (single sub-disciple)	NA (single sub-disciple)	Pheng and Ming (1997)
	✓							QUANT	Marketing	Singapore	NA (single sub-disciple)	NA (single sub-disciple)	Pheng, and Gracia (2002)
✓	✓			✓				QUANT	Work-related stress	India	No	Yes	Saikala, and Selvarani (2015)
✓				✓		✓		QUAL	Knowledge management	International	No	Yes	Scott and Kanjanabootra (2018)
CPS (sub-discipline not specified)								Conceptual review	Knowledge management	Ireland	NA	Yes	Seriki and Murphy (2019)
CPS (sub-discipline not specified)								Conceptual review	Economics and business strategy	Ireland	NA	Yes	Seriki and Murphy (2019)
	✓							QUANT	Economics and business strategy	Australia and Asian-Pacific	NA (single sub-disciple)	NA (single sub-disciple)	Shayan *et al.,* (2019)

Architect	Quantity surveyor	Surveyor other	Building services engineer	Civil & structural engineer	Planning surveyor	Project manager	Building surveyor	Research Design	Subject	Geographic Area	Data collected for sub-professions separately	CPS sub-professions considered homogeneous	Article
CPS (sub-discipline not specified)								QUANT	Motivation	Australia	No	Yes	Smithers and Walker (2000)
CPS (sub-discipline not specified)								Conceptual review	Leadership	Non-specified	No	Yes	Toor, and Ofori (2008)
✓		✓				✓		Qual-QUANT	Project management	Thailand	Yes	Yes. Some differences were noted but conclusions are presented for CPS collectively.	Toor and Ogunlana, (2009)
✓				✓				Conceptual review	Marketing	USA	NA	Yes	Treado, and Brunswick (2018)
				✓				QUAL	Diversity and culture	UK	NA (single sub-disciple)	NA (single sub-disciple)	Watts, (2007)
	✓							QUANT	Marketing	Ghana	NA (single sub-disciple)	NA (single sub-disciple)	Yankah (2015)

Figure A1. Subject matter within the CPS reviewed literature.

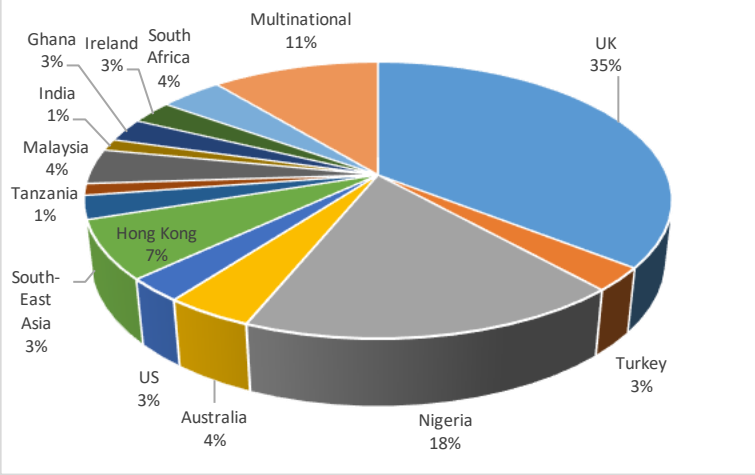


Figure A2. Geographical location of the CPS populations studied.

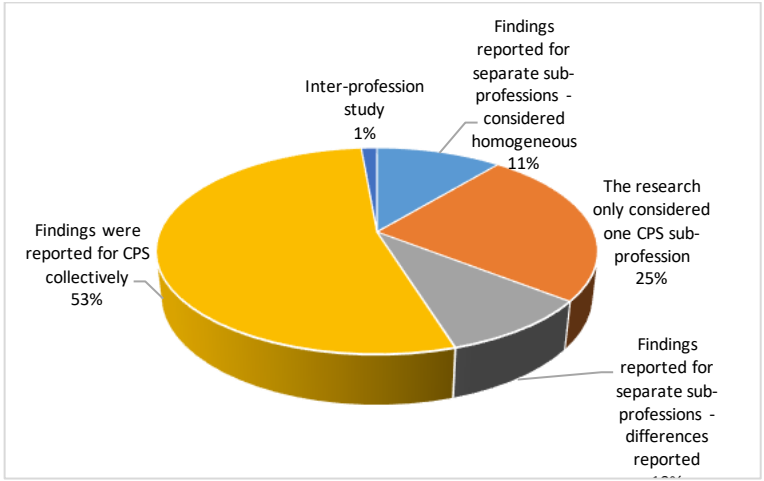


Figure A3. Findings of CPS articles regarding sub-profession homogeneity.

Appendix B. Sources used for analysis of service loyalty

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Firm loyalty Employee loyalty	Self-expressed loyalty to firm (prospective – attitudinal) Self-expressed loyalty to key contact employee (prospective – attitudinal).	Loyalty to the firm is defined as "*The buyer's behavioural intention to remain committed to a selling firm by engaging in behaviours deemed at continuing the relationship*" (Sirdeshmukh, *et al.,* 2002 in Anaza and Rutherford 2014 p.429). Personal loyalty defined as *"the commitment and intention to continue dealing with the particular associate.*" (Reynolds and Arnold, 2000, in Anaza and Rutherford 2014 p.429).	Firm and individual considered separately.	Attitudinal PWOM measured as a separate outcome from loyalty Share of wallet (repatronage) measured as a separate outcome from loyalty *RP, and AL and PWOM*	Quantitative only	Satisfaction with the key contact employee was positively associated with satisfaction with the firm, loyalty to the key contact employee and SOW. Satisfaction with the firm employee was positively associated with loyalty to the firm, firm PWOM and SOW. Loyalty to the employee was associated with employee PWOM. Loyalty to the firm was not associated with firm PWOM. Key contact employee loyalty was positively associated with firm loyalty.	Anaza and Rutherford (2014)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Attitudinal only	Attitude towards future purchases with service provider (prospective – attitudinal)	"*Attitudinal brand loyalty consists of attitudes toward intention to repurchase and brand commitment*" and "*behavioural brand loyalty is defined as the customer's tendency to repurchase a brand revealed through behaviour which can be measured and which impacts directly on brand sales*" (Bennet Charmine and McColl-Kennedy. 2005, p.98).	Firm	Attitudinal *AL*	Quantitative only.	Involvement and satisfaction were positively associated with loyalty. Where the purchase risk was higher, involvement had a stronger influence. Where the client had more experience, satisfaction had a stronger influence.	Bennet Charmine and McColl-Kennedy (2005)
Repatronage & PWOM	Have encouraged others to do business with firm (retrospective- PWOM) Intention to repurchase (prospective- repatronage) Intention to increase the level of purchasing (prospective- repatronage)	"*Phenomena expressed through continued patronage, increased share/ demand, and WOM behaviour*" (Briggs and Grissaff, 2010. p.39).	Firm	Repatronage and PWOM combined within single construct *RP + PWOM*	Quantitative only	Service performance was positively associated with economic value and trust, these being associated with loyalty. Organisational norms and industry competition were found to have moderating influences.	Briggs and Grissaff (2010)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage only	Likelihood of renewing contract (prospective- repatronage) Likelihood of recommended (prospective – PWOM) Likelihood of increasing service (prospective – repatronage)	"*Behavioural intentions to renew the contract, make recommendations and increase patronage*" (Bolton, Smith and Wagner, 2004, p.274).	Firm	Repatronage fused with a PWOM measure *RP + PWOM*	Quantitative only	Social factors were more strongly associated with interpersonal satisfaction than economic factors. Economic factors were more strongly associated with inter-organisational relationship satisfaction than social factors. Economic and social factors are positively associated with value which in turn was associated with behavioural loyalty.	Bolton, Smith and Wagner (2003)
Repatronage only.	Likelihood of more frequent purchasing in the future (prospective-repatronage) Likelihood of continuing to purchase in the future (prospective-repatronage)	None defined. Loyalty was operationalised by repatronage.	Firm	Repatronage only *RP*	Exploratory qualitative phase followed by quantitative phase	Trust was positively associated with commitment mediated by intimacy. Customer knowledge was positively associated with intimacy which in turn was associated with loyalty mediated by commitment.	Brock and Zhou (2012)
Repatronage intentions and PWOM	Intention to re-purchase (prospective-repatronage) Impact of experience on future decision making (prospective - attitudinal) Intention to renew contract (prospective-repatronage) Previous referrals given (retrospective - PWOM)	"*An intention to purchase the same services (retention) and additional services (expansion) as well as the buyer's activity in recommending the provider to others (referral)*" (Cahill *et al.,* 2010, p.255).	Firm	Repatronage and PWOM combined within single construct *RP + PWOM*	Quantitative only.	Service satisfaction and relationship satisfaction were directly associated with loyalty. No significant relationship was found between price satisfaction and loyalty.	Cahill *et al.,* (2010)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage & PWOM	Intention to repurchase (prospective- repatronage) Intention to give referrals (prospective - PWOM)	"*A deeply held commitment to rebuy or patronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour*" (Oliver, 1999, in Caseres and Paparoidamis, 2007., p.838).	Firm	Repatronage and PWOM combined within a single construct *RP + PWOM*	Exploratory qualitative phase followed by quantitative phase	Relationship satisfaction was a mediator between service quality and trust, commitment and satisfaction. Relationship satisfaction is associated with trust commitment and loyalty. Trust was associated with commitment which in turn was associated with loyalty.	Caseres and Paparoidamis (2007)
Attitudinal & PWOM	Say positive things about supplier (current- PWOM) Recommend supplier (current – PWOM First choice supplier (current - attitudinal)	"*A construct that measures the probability that the customer will return and is ready to perform partnering activities such as referrals"* (Bowen & Shoemaker, 2003, in Cater and Cater 2009., p.153).	Firm	Attitudinal loyalty and PWOM combined within single construct *AL + PWOM*	Exploratory qualitative phase followed by quantitative phase.	Trust and social bonds were positively associated with affective commitment which in turn was associated with loyalty. Adaptation and knowledge transfer where with relational benefits which in turn was associated with relationship benefits.	Cater and Cater (2009)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Attitudinal & PWOM	Say positive things about supplier (current- PWOM) Recommend supplier (current - PWOM) First choice supplier (current - attitudinal)	"*A construct that measures the probability that the customer will return and is ready to perform partnering activities such as referrals"* (Bowen & Shoemaker, 2003, in Catar and Zabkar, 2009, p.788).	Firm	PWOM and attitudinal loyalty combined into single construct *AL + PWOM*	Exploratory qualitative phase followed by quantitative phase	Trust, social bonds and satisfaction were positively associated with affective commitment which in turn was associated with loyalty. No significant relationship was found between calculative or normative commitment with loyalty.	Cater and Zabkar (2009)
Repatronage and attitudinal PWOM	Say positive things about supplier (current- PWOM) First choice supplier (current - attitudinal) Do more business with supplier prospective - (repatronage) Recommend supplier (current - PWOM)	A mixture of attitude and behaviour most often defined as repeat patronage and referral behaviour.	Firm	PWOM construct Combined repatronage and attitudinal construct *RP + AL and POM*	Exploratory qualitative phase followed by quantitative phase.	Quality and affective commitment significant predictors of both loyalty constructs.	Cater and Cater (2010)
PWOM only	Would recommend to others (prospective – PWOM)	None defined	Firm	*PWOM*	Quantitative only	Service quality and trust were positively associated with commitment, mediated by differentiation. Commitment was associated with PWOM.	Chenet, Dagger and O'Sullivan (2010)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage intentions Attitudinal loyalty	Share of wallet – SOW (retrospective- repatronage) Self-expressed commitment to the relationship (prospective – attitudinal)	Attitudinal loyalty defined as "*loyalty commitmen*t" which was "the sense of unity binding buyers to suppliers" and "*the extent to which parties like to maintain their relationships*" (Doney, Barry & Abratt, 2007, p.1103).	Firm	Attitudinal and repatronage considered separately *RP and AL*	Quantitative only	Value, service quality, customer orientation and communication were all positively associated with trust which in turn was associated with both loyalty commitment (attitudinal loyalty) and share of purchase.	Doney, Barry & Abratt (2007)
Attitudinal only	Long-term view of relationship (prospective -attitudinal)	None defined. Loyalty was operationalised by attitude towards the relationship.	Firm	Single-item measure of attitudinal loyalty. *AL*	Quantitative only	Relationship satisfaction was positively associated with retention. Purchase development. Organisational change was negatively associated with retention.	Erkisson and Vaghult (2000)
Repatronage and attitudinal	Retention Alternative supplier seeking (current-repatronage) Willing to repurchase same service (current – repatronage) Willing to purchase other services (current – repatronage) Attitudinal Willing to solve problems (current – attitudinal) Willing to invest (current – attitudinal) Willing to provide extra budget (current – attitudinal)	None defined. A combination of retention and willingness to invest in the relationship was used	Firm	Separate constructs for retention (repatronage) and attitudinal loyalty *RP and AL*	Quantitative only	Service quality and bonding strategy were positively associated with affective commitment, which in turn was associated with retention and willingness to invest.	Gounaris (2005)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
PWOM Attitudinal loyalty	Would encourage others to do business with the supplier (prospective – PWOM) Would recommend supplier (prospective – PWOM) Effort seeking alternative supplier (current – attitudinal)	None used or defined. Loyalty was operationalised by attitudinal loyalty and PWOM.	Firm	Attitudinal loyalty and PWOM measured separately *AL and PWOM*	Quantitative only.	Information sharing, flexibility and reputation were positively associated with perceived value. The latter was positively associated with PWOM and negatively associated with switching intentions.	Hansen *et al.,* (2008)
Attitudinal repatronage intentions & PWOM	Say positive things (current-PWOM) Recommend others (current – PWOM) Encourage others to do business (current – PWOM) Consider choice supplier (current – attitudinal) Do more business with supplier in future (prospective – repatronage)	"*A deeply held commitment to re-patronize a preferred product/service consistently in the future*" (Oliver, 1999, in Hong and Goo, 2004, p.534)	Firm	Attitudinal, repatronage and PWOM fused within loyalty measure *RP + AL + PWOM*	Quantitative only	Service quality, satisfaction, price and image quality were associated with satisfaction which was associated with loyalty. Image was also directly associated with loyalty.	Goo (2004)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage only	• Intention to re-purchase (prospective-repatronage) • Intention to increase the level of repurchasing (prospective-repatronage) • Intention to continue the relationship (prospective-repatronage)	"*The degree of a firm's intention to continue the relationship with a supplier and to expand the quantity and volume of this relationship"* (Homburg *et a*l., *2003, in Huang*, Leu and Farn, 2008, p.8).	Firm	Repatronage only *RP*	Quantitative only	Value and quality were positively associated with affective commitment which in turn was associated with loyalty.	Huang, Leu and Farn (2008)
Attitudinal only	Firm loyalty Willing to put in effort to receive service (current - attitudinal) Proud to tell others that purchase from [firm] (current - attitudinal) Stimulating to buy repeatedly from [firm] (current – attitudinal) [firm] is first choice supplier (retrospective – attitudinal). Personal loyalty Similar values to employee (current- attitudinal) Prefer employee over others (current- attitudinal) Care about employee (current-attitudinal)	"*The preferential attitudinal and/or behavioural response towards one or more brands. Expressed over a period of time by a customer*" (Engel and Blackwell, 1982, in Jayawardhena *et al*., 2007, p.578).	Firm and individual considered separately	Attitudinal only *AL*	Exploratory qualitative phase followed by quantitative phase.	Service encounter quality and service quality were positively associated with satisfaction which in turn was associated with personal loyalty. Personal loyalty was positively associated with loyalty to the firm.	Jayawardhena *et al.,* (2007)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage only	Intention to repurchase services (prospective – repatronage) Intention to do more business with firm (prospective – repatronage) Will consider firm first choice (prospective – attitudinal) Intention to recommend (prospective – repatronage)	"*Willingness to try new products, spreading positive word-of mouth, and resilience to negative information associated with the Company"* (Bhattacharya & Sen, 2003, in Keh and Xie, 2009. p.734)	Firm	Repatronage and attitudinal fused within the same construct *RP + AL*	Quantitative only.	Reputation and company identification with trust. Trust was associated with company identification. Trust and company identification were associated with loyalty mediated by commitment.	Keh and Xie (2009)
Attitudinal behavioural intentions & PWOM	Intention to repurchase (prospective- repatronage) Advocacy, recommendations and encouraging others to use firm (retrospective - PWOM) First choice supplier (retrospective – attitudinal)	"Behaviour or a disposition to behave positively towards a service provider" (Lam *et al.,* 2004, p.297).	Firm	Separate constructs for attitudinal and repatronage PWOM fused with attitudinal measure *RP and AL + PWOM*	Quantitative only	Value was positively associated with satisfaction which in turn was associated with both repatronage and PWOM. Switching costs were positively associated with repatronage.	Lam *et al.,* (2004)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage intentions attitudinal and PWOM	Intention to purchase other services (prospective – repatronage) Intention to switch (prospective – repatronage) Intention to repurchase same services (prospective – repatronage) Intention to recommend (prospective – repatronage)	None defined.	Firm	Repatronage and PWOM fused within the same construct *RP + PWOM*	Quantitative only.	Service quality and personal quality were positively associated with value which in turn was associated with satisfaction which was associated with loyalty. Client's relational orientation (commitment) was a moderator increasing the importance of image, quality, service quality and satisfaction. For clients with low relational orientation the only moderating factor was quality.	Lee and Bellman (2008)
Repatronage only	Likelihood of switching (prospective – repatronage)	Switching behaviour, an inverse concept of loyalty was the focus of study.	Firm	Repatronage only *RP*	Exploratory qualitative phase followed by quantitative phase	Reasons for the absence of loyalty were identified, such as price, value, relationships, reputation and service.	Naumann *et al.,* (2010)
Repatronage intentions PWOM	Will repurchase (prospective-repatronage) Expect the relationship to last (prospective – repatronage) Likely to maintain level of business (prospective – repatronage) Will continue repurchase if prices increase (prospective – repatronage)	None defined. Loyalty was operationalised by repeat patronage intentions.	Firm	Separate constructs for repatronage and PWOM *RP and PWOM*	Quantitative only	Positive disconfirmation was positively associated with satisfaction and quality. Positive disconfirmation, satisfaction and value were positively associated with repeat patronage intentions.	Molinari, Abratt and Dion (2008)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage only	Likelihood of terminating the relationship (prospective – repatronage)	None defined.	Firm	Switching behaviour *RP*	Exploratory qualitative phase followed by quantitative phase.	Communication was positively associated, trust whilst opportunistic behaviour negatively associated with trust. Relationship benefits, and termination costs were positively associated with commitment. Trust was negatively associated with propensity to leave, mediated by commitment.	Morgan and Hunt (1994)
Repatronage only	Analysis of reasons for defecting or remaining loyalty by order of importance.	Loyalty or defection – repatronage.	Firm	Repatronage only *RP*	Exploratory qualitative phase followed by quantitative phase	Reasons for loyalty were identified, such as satisfaction, expertise, quality, speed of service, value for money, lack of alternatives, switching cost and contractual constraint.	Palihawadana & Barnes (2004)
Repatronage intention & PWOM	Personal loyalty • Would shift to new supplier (prospective – repatronage) • Reduced loyalty to firm if employee left (prospective – repatronage) • Feel more loyal to employee than firm (current – attitudinal) • Would recommend employee even if they left the firm (prospective – PWOM) Firm loyalty • prefer firm for next purchase (prospective – repatronage)	"*Intention to perform a diverse set of behaviours that signal a motivation to maintain a relationship*" (Sirdeshmukh, Singh, and Sabol 2002, in Palmatier, Scheer and Steencamp 2007, p.186).	Firm and individual	Personal loyalty Attitudinal loyalty, repatronage and PWOM combined within single construct Firm loyalty repatronage & PWOM combined in single	Quantitative only	Relationship enhancing activities and consistency were positively associated with loyalty. Personal loyalty was also positively associated with firm loyalty.	Palmatier *et al.,* (2007)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage intentions & PWOM	• Intend to increase business with firm (prospective – repatronage) • Say positive things and recommend the firm (current-PWOM) • Would recommend and encourage others to do business with the firm (prospective-PWOM)			construct *RP + AL + PWOM*			
Attitudinal repatronage intentions, and PWOM	• Have said positive things about firm (retrospective-PWOM) • Have recommended firm (retrospective-PWOM) • Have encouraged others to do business (retrospective-PWOM) • Plan to continue doing business (prospective – repatronage) • First choice supplier (current-attitudinal)	"*A deeply held commitment to re-patronize a product/service consistently in the future*" (Oliver, 1999, in Ramaseshan, Rabbanee and Tan Hsin Hui, 2013, p.336)	Firm	Attitudinal, repatronage and PWOM fused within loyalty measure *RP + AL + PWOM*	Quantitative only	Brand, value and relationship equity were positively associated with trust which in turn was associated with loyalty. A direct positive relationship was associated with value and loyalty. Brand equity is a similar construct to reputation.	Ramaseshan, Rabbanee and Hui (2013)
Repatronage Attitudinal & PWOM	• Intention to repurchase (prospective – repatronage) • Advocacy, recommendations and encouraging others to use the firm (retrospective - PWOM) • First choice supplier (current – attitudinal)	"*The level of a customer's psychological attachments and attitudinal advocacy toward the service provider/supplier*" (Chaudhuri and Holbrook 2001, in Rauyruen and Miller, 2007, p.23)	Firm	Attitudinal and repatronage conceptual-ised and measured separately Attitudinal loyalty used a PWOM measure RP and AL + PWOM	Quantitative only	Relationship quality (trust, commitment, service quality, satisfaction) were all positively associated with attitudinal loyalty. Only satisfaction and perceived service quality were positively associated with repatronage.	Rauyruen and Miller (2007)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage only	Likelihood of using service provider in the future (prospective-repatronage)	None defined. Loyalty was operationalised by likelihood of future use.	Firm	Repatronage only *RP*	Quantitative only	Competitive pricing, business-seeking behaviour and prior usage were associated with loyalty. Business seeking opportunity, understanding of client business and current usage were associated with both perceived performance (satisfaction) and long-term relationship orientation (commitment) which in turn were associated with loyalty.	Reddy and Czepiel (1999)
Repatronage intentions only	• Intention to continue doing business with firm (prospective-repatronage)	"*A buyer's intent to repurchase from a given supplier*" (Russo, 2016, p.889).	Firm	Repatronage only *RP*	Qualitative comparative analysis	Satisfaction, value, aftercare and switching costs were found to be positively associated with loyalty in a number of different situational configurations.	Russo *et al.,* (2016)
Repatronage only	Intention to repurchase (prospective- repatronage)	None defined. Loyalty was operationalised by repeat patronage intentions.	Firm	Repatronage only *RP*	Exploratory qualitative phase followed by quantitative phase	Communication quality was associated with both perceived technical and function quality. Process quality but not technical quality was associated with perceived value which in turn was associated with repatronage (retention). The control variable 'relationship length' positively influenced Repatronage intentions.	Sarapaivanich & Patterson (2015)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage attitudinal and PWOM	• Proportion of service requirement given to supplier (current – repatronage) • Likelihood of repurchase (prospective – repatronage) • Likelihood of retaining service provider (prospective – repatronage) • Frequency of recommendation (retrospective – PWOM) • Likelihood of recommendation (prospective – PWOM)	*"Loyalty is expressed as the buyer's intention to repatronise the seller. Attitudinal loyalty is demonstrated when the buyer recommends the seller to the buyer's customers*" (Schackett *et al*., 2011, p.271).	Firm	Attitudinal, repatronage and PWOM fused within loyalty measure *RP + AL + PWOM*	Quantitative only	Social bonding was positively associated with trust, loyalty, service quality and satisfaction.	Schackett *et al*., (2011)
Attitudinal repatronage intentions and PWOM	• Say positive things (current-PWOM) • Recommend others (current – PWOM) • Encourage others to do business (current – PWOM) • Consider choice supplier (current – attitudinal) • Do more business with supplier in future (prospective – repatronage)	None defined. Loyalty is conceptualised as an intention, an antecedent to retention.	Firm	Attitudinal, repatronage and PWOM fused within loyalty measure *RP + AL + PWOM*	Quantitative only	Service level, service quality, value and satisfaction were positively associated with loyalty and retention. Loyalty was positively associated with retention. Price had a significant but smaller positive influence of loyalty and retention.	Trasorras Weinstein and Abratt, (2009)
Repatronage only	Conceptualisation via achieved via interviews and case studies.	None defined.	Firm and individual	Retention and switching behaviour *RP*	Qualitative	Implementing and promoting a wider service team together with management visibility was found to buffer the client-supplier relationship following the loss of a key contact employee.	Vafeas (2010)

Loyalty Dimensions	Loyalty measures	Loyalty definition used	Level	Loyalty construct type	Methodology	Loyalty mechanism	Article
Repatronage intentions only	• Intention to repurchase (prospective –repatronage) • Actual retention behaviour via follow up study	None defined. The study operationalised and compared loyalty in two ways, specifically repatronage intentions in context with a follow-up evaluation of actual retention/switching behaviour.	Firm	Repatronage only *RP*	Quantitative only	Satisfaction, service quality and behavioural intentions were significantly but rather weakly associated with retention. Defecting customers were found to be more price sensitive than more loyal (retained) customers.	Williams *et al.,* (2011)
Attitudinal repatronage intentions & PWOM	• Say positive things (current-PWOM) • Recommend others (current – PWOM) • Encourage others to do business (current – PWOM) • First choice supplier (current – attitudinal) • Do more business with supplier in future (prospective – repatronage)	Concept manifested by *"customers expressing a preference for a company over others, continuing to purchase from it or increasing business with it in the future*" Zeithman, Berry and Parusaruman (1996, p.34).	Firm	PWOM fused with attitudinal and repatronage measures *RP + AL + PWOM*	Quantitative only	Service quality (SERVQUAL model comprising reliability, assurance, tangibles, empathy and responsiveness was positively associated with loyalty.	Zeithman, Berry and Parusaruman (1996)

Appendix C. Ethical approval forms

Ethical Approval Form (Faculty of Science and Engineering)

Survey input field	Respondent's answer
Name:	Nick Williams

1. Please enter your surname and first name below. (SURNAME, FIRST NAME)
Williams, Nick

2. Please enter your University email address (e.g. M.Name@wlv.ac.uk)
[e-mail address redacted]

3. Please enter the name of your Director of Studies, Principal Investigator or, for Principal Investigators, your line manager.
Paul Hampton

4. Please enter date by which a decision is required below. (Note that decisions can take up to 4 working weeks from date of submission)
18/03/18

5. Which subject area is your research / project located?
1. **Architecture and Built Environment** 2. Biology, Chemistry and Forensic Science 3. Engineering 4. Life Sciences 5. Mathematics and Computer Science 6. other

6. Please select your School
1. School of Architecture and Built Environment 2. School of Biomedical Science and Physiology 3. School of Biology, Chemistry and Forensic Science 4. School of Engineering 5. School of Mathematics and Computer Science 6. School of Pharmacy 7. Other (please specify below)

7. Does your research fit into any of the following security-sensitive categories? (For definition of security sensitive categories see RPU webpages (www.wlv.ac.uk/rpu) follow links to Ethical Guidance).
1. commissioned by the military 2. commissioned under an EU security call 3. involve the acquisition of security clearances 4. concerns terrorist or extreme groups **5. not applicable**

8. Does your research involve the storage on a computer of any records, statements or other documents that can be interpreted as promoting or endorsing terrorist acts?
1. YES 2. **NO**

9. Might your research involve the electronic transmission (eg as an email attachment) of any records or statements that can be interpreted as promoting or endorsing terrorist acts?

1. YES
2. NO

10. Do you agree to store electronically on a secure University file store any records or statements that can be interpreted as promoting or endorsing terrorist acts. Do you also agree to scan and upload any paper documents with the same sort of content. Access to this file store will be protected by a password unique to you. Please confirm you understand and agree to these conditions?

1. YES I understand and agree to the conditions
2. NO (please explain below)
3. I do not understand the conditions

11. You agree NOT to transmit electronically to any third-party documents in the University secure document store?

1. YES I agree
2. NO I don't agree

12. Will your research involve visits to websites that might be associated with extreme, or terrorist, organisations? (for definition of extreme or terrorist organisations see RPU webpages (www.wlv.ac.uk/rpu) and follow links to Ethical Guidance.

1. YES (Please outline which websites and why you consider this necessary)
2. NO

13. You are advised that visits to websites that might be associated with extreme or terrorist organisations may be subject to surveillance by the police. Accessing those sites from university IP addresses might lead to police enquiries. Do you understand this risk?

1. YES I understand
2. NO I don't understand

14. What is the title of your project?

An investigation into client loyalty to construction professional service firms.

15. Briefly outline your project, stating the rationale, aims, research question / hypothesis, and expected outcomes. Max 300 words.

The aim of the research is to develop an understanding of the factors that build client-loyalty for construction professional service (CPS) firms operating in the UK business-to-business (B2B) markets via empirical research. The global demand for construction professional services is rising but many construction professionals have neither the time nor the skills to effectively market their services offerings (Sawczuk, 2010). Therefore, retaining and developing existing client accounts becomes vital. A literature review has identified that this problem has not been empirically researched.

The aim is to develop and test a model of client loyalty to CPS firms identifying the factors that most strongly influence it, gaining insight which will be of interest to professionals and academics. The scope is construction professional service firms operating in the UK business-to-business (B2B) market.

Research questions.
1. What are main factors influencing client-loyalty to CPS firms?
2. What is the target of client loyalty? If loyalty is centred towards the employee, is it an asset or a liability for the firm?
3. What are the outcomes of client-loyalty for CPS firms?

Expected outcomes
The expected outcome will be a model of client-loyalty to firms operating in the UK CPS business-to-business market. This will provide insight into how construction professionals can improve the value and duration of their client-relationships. It will also add to literature associated with professional service firms (PSF's) in general. PSF's are knowledge-intensive firms and therefore of particular interest as models for increasingly knowledge-based economies (Løwendahl, 2005).

16. How will your research be conducted?
Describe the methods so that it can be easily understood by the ethics committee. Please ensure you clearly explain any acronyms and subject specific terminology. Max 300 words

Conducting the research.

• A literature review will be carried out to build a theoretical model of client-loyalty for construction professional service (CPS) firms. Given the lack of extant research associated with client-loyalty to CPS firms, the model will be developed using evidence from wider professional service firms (PSF's) and B2B service markets.

• The study will focus on collecting data from the clients of CPS firms. The definition of CPS is based on that of the Construction Industry Council, broadly defining CPS as including "*architects, quantity surveyors, surveyors (other), building services engineers, civil and structural engineers, planners (town planners), project managers and multidisciplinary practices*" (CIC, 2008, p.3).

• A mixed method research design is proposed which closely resembles the exploratory sequential design as defined by Creswell and Plano Clark (2011). Such an approach begins with the collection and analysis of qualitative data. This is followed by a quantitative phase to test and generalise the initial findings.

• The initial qualitative phase will involve carrying out semi-structured interviews with clients of professional service firms to gain real-life insight. Approximately 20 interviews will be carried out, depending on the homogeneity of the data in order to reach the required degree of saturation.

• Data gained from the qualitative phase will be subject to analysis in order to identify the themes and allow the modification of the theoretical model developed during the literature review.

• The model will then be quantitatively tested. This will involve the development of an instrument for use in a cross-sectional survey. Scales from extant studies which have already been reliability-tested will be used wherever possible. Data will be gathered from the wider population of CPS-clients for factor analysis and hypothesis testing in SPSS.

17. Is ethical approval required by an external agency? (e.g. NHS, company, other university, etc)

1. NO
2. YES - but ethical approval has not yet been obtained
3. YES - see contact details below of person who can verify that ethical approval has been obtained)

18. What in your view are the ethical considerations involved in this project? (e.g. confidentiality, consent, risk, physical or psychological harm, etc.) Please explain in full sentences. Do not simply list the issues. (Maximum 100) words)

Given that the qualitative research phase will involve semi-structured interviews exploring inter-firm relationships, it is important to ensure anonymity for all participants. The names of client's and their service providers will be anonymised in the thesis. The research does not involve any particular physicals risks. Nor will the study require collection of data from vulnerable groups. The risks of causing psychological harm are deemed to be low and will be further reduced by ensuring interview participants understand that their anonymity will be maintained, and data treated as confidential. The principles apply to both the qualitative and quantitative research phases.

19. Have participants been/will participants be, fully informed of the risks and benefits of participating and of their right to refuse participation or withdraw from the research at any time?

1. YES (Outline your procedures for informing participants in the space below.
2. NO (Use the space below to explain why)
3. Not applicable - There are no participants in this study

During the qualitative phase, interview participants will be informed of the benefits of participating, specifically their contribution to gaining further knowledge in the area of research. Participants will be informed that their anonymity will be ensured and that they have the right to right to refuse participation or withdraw from the research at any time. This will be made clear in writing when preparing the interview and re-iterated at the beginning as part of consent assurance.
The survey instrument will clearly state that participation is voluntary and that the results will be anonymised.
The limits of ability to withdraw participation from the study will be made clear from the start, particularly in respect to anonymised information once gathered and pooled with wider data.

20. Are participants in your study going to be recruited from a potentially vulnerable group? (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of vulnerable groups)

1. YES (Describe below which groups and what measures you will take to respect their rights and safeguard them)
2. NO

21. How will you ensure that the identity of your participants is protected (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for guidance on anonymity)

Participants names will be removed from the data, both on interview transcripts and questionnaires to ensure anonymity. Furthermore, secondary identification which could be used to triangulate the identity of the person such as age, place names, job title, employer etc. will also be anonymised. The same principles will apply to the employing organisations, ensuring they also remain anonymous. Formal consent for participation and use of data (subject to the stated precautions) will be obtained from participants.

22. How will you ensure that data remains confidential ((See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of confidentiality)

'Confidentiality' relates to the protection of the data collected. It will not be shared within anyone except those directly involved in the study such as the supervisory team and examiners. The names of all participating individuals and organisations will be swapped with codes known only to the researcher. Any names of individuals or firms used by interviewees will also be coded on interview transcripts and questionnaires.
• Data will be separated from identifiable individuals. Any codes linking data to individuals will be securely stored in a password-protected encrypted file.
• Sharing of the data will be reduced to the absolute minimum. Person to whom the data will be shared must have formally declared the same assurances regarding confidentiality and anonymity.
• The researcher will not discuss or disclose to anyone anything an interview subject or questionnaire cohort has said or written.

23. How will you store your data during and after the project? (See RPU website (www.wlv.ac.uk/rpu) and follow link to Ethical Guidance pages for definition of and guidance on data protection and storage).

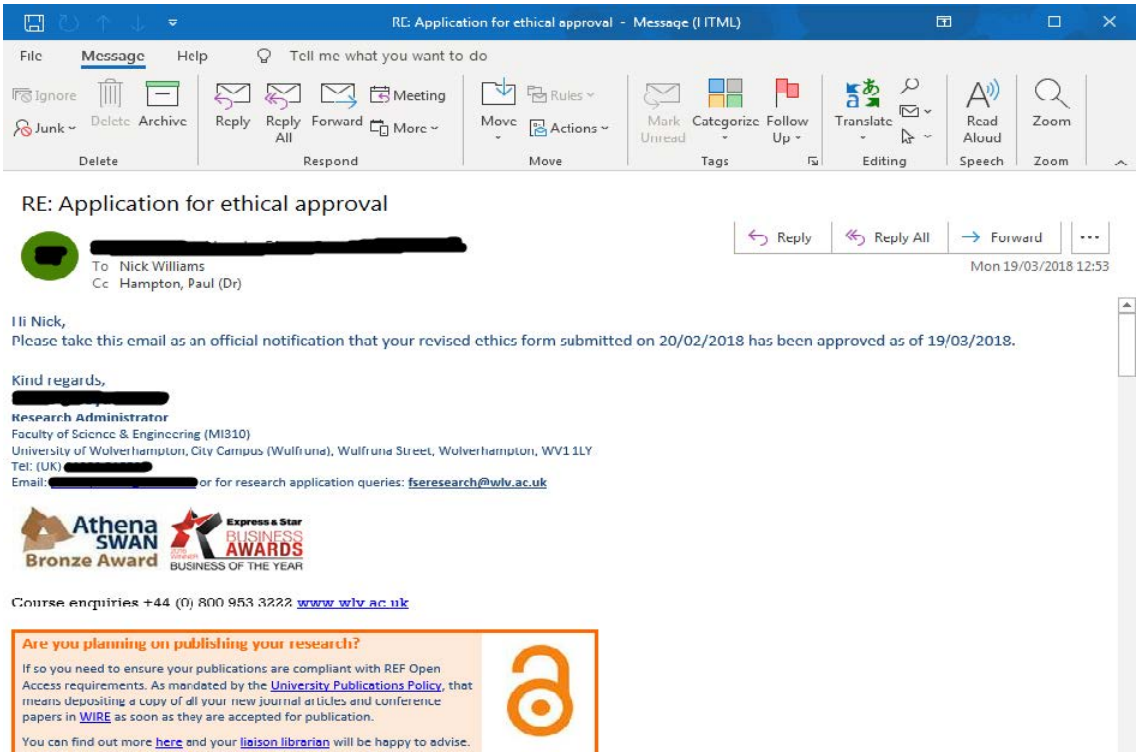
Data will be collected in documented forms and on audio transcripts in electronic formats.

Electronic data will be stored in the following locations.
• On the student's shared folder on University servers.
• On a laptop provided by the student's employer and students shared folder on university servers.
The student's employer holds ISO 27001 data security accreditation for data protection. The laptop is managed by the employer's IT department with built-in security and anti-threat software.
• Data will not be stored on USB sticks and media. For data backup, the student will benefit from the employers RAID server backup and disaster recovery protocol.

Only the student and authorised persons such as supervisory team and examiners will have access. The data will not be shared with any third party (such as transcription services) without approval and assurance that confidentiality and anonymity can be assured.

Data will be organised and stored in a manner to facilitate a third-party audit to confirm the student's conformance to ethical requirements. This includes maintaining a log of all participant consent documentation.

Any hardcopy information relating to subjects will be copied to an electronic file format and the original hard copies shredded. All information created during the study, except that which must be retained (for example the formal thesis document) will be stored for 2 years and then destroyed confidentially.


RE: Application for ethical approval - Message (HTML)
File
Message
Help
Tell me what you want to do
Ignore
Junk
Delete
Archive
Reply
Reply All
Forward
Meeting
More
Move
Rules
Actions
Mark Unread
Categorize
Follow Up
Translate
Read Aloud
Zoom
Delete
Respond
Move
Tags
Editing
Speech
Zoom
RE: Application for ethical approval
[redacted]
To Nick Williams
Cc Hampton, Paul (Dr)
Reply
Reply All
Forward
Mon 19/03/2018 12:53
Hi Nick,
Please take this email as an official notification that your revised ethics form submitted on 20/02/2018 has been approved as of 19/03/2018.
Kind regards,
[redacted]
Research Administrator
Faculty of Science & Engineering (MI310)
University of Wolverhampton, City Campus (Wulfruna), Wulfruna Street, Wolverhampton, WV1 1LY
Tel: (UK) [redacted]
Email: [redacted] or for research application queries: fseresearch@wlv.ac.uk
Athena SWAN Bronze Award
Express & Star BUSINESS AWARDS
BUSINESS OF THE YEAR
Course enquiries +44 (0) 800 953 3222 www.wlv.ac.uk
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You can find out more here and your liaison librarian will be happy to advise.

Appendix D. Interview consent form

Informed Consent Form

Name of Project: Client commitment and loyalty to construction professional service providers.
Researcher: Nick Williams

Part 1 information Sheet.

Introduction.
I am Nick Williams, a part-time post-graduate researcher at the University of Wolverhampton. My principal employment is as a Director and chartered surveyor at DMW Environmental Safety Ltd, a specialist environmental services firm in Wolverhampton. I am researching client-commitment and loyalty to construction professional service providers, a group which includes surveyors, architects, structural engineers and construction consultants. Information about the research is provided below.

Participant selection.
You are being invited to take part in the research as I understand that you have either or both of the following:

- Experience as a client working with construction professionals having influence over the decision to retain their services.

- Experience as a construction professional service provider yourself with experience of working directly for clients.

Type of research carried out.
Your participation will be by means of an interview with me, during which we will discuss issues around the research topic.

Procedures.
The interview will be carried out in a private quiet area. I will record the interview discussions and use the findings in my research analysis.

Duration.
The interview will take approximately 60 minutes.

Purpose of the research
I am aiming to learn about client commitment and loyalty to construction professional service firms and individuals. Although built-environment professionals may be experts in their technical fields, evidence suggests that they commit relatively little time and resources in understanding what builds client commitment and loyalty. Better and longer-lasting professional relationships have been shown to lead to efficiencies and benefits for both service providers and their clients.

Voluntary participation
Your participation is entirely voluntary. You do not have to participate if you don't want to. You do not have to decide today if you wish to participate.

Right to refuse or withdraw.
If you decide leading up to or during the interview that you no longer wish to participate you have the right to do so. If immediately after participating, you decide you no longer wish the results of the interview to be used in the research please contact me. However, if you contact me after I have anonymised the data I may not be able to identify it for removal from the collected data set.

Confidentiality
The information you provide will be entirely confidential and anonymous. Your name, the name of your employer and any names of individuals or firms mentioned during the interview will be anonymised. A professional transcription service may be used to convert audio into text transcripts. My supervisory team at the University of Wolverhampton will have access to the transcripts after anonymisation.

Risks
There is a very low risk that during the interview that you may share some sensitive information or feel uncomfortable answering some of the questions. You do not have to answer questions if you don't want to.

Reimbursements
Your participation is voluntary.

Sharing the results.
I reiterate that all identifics, and personal information will remain confidential during the dissemination of the results of this research. The results of the research may be published in journal articles and on the university of Wolverhampton repository. No names of either you nor anyone you mention will be identifier in the research

Final clarification.
If there is anything on this form that you do not understand or wish me to clarify please ask me.

Part 2. Certificate of content.

I have been invited to participate in the research project ***'Client commitment and loyalty to construction professional service providers'***

I have read the foregoing information in Part 1 and I confirm that I have understood the information provided. I have had the opportunity to ask questions and any questions have answered to my satisfaction. I therefore voluntarily consent to be a participant in this study.

- I understand that I am free to ask any questions at any time;
- I am free to discuss any questions or comments I would like to make to Nick Williams and/or his supervisory team;
- I also understand at the end of the study I will have the opportunity to request any information about the study results by contacting either Nick Williams or his supervisory team.

Print Name of Participant_____

Signature of Participant_____

Date_____

Who to contact.
If you have any questions you can ask them now or later. If you wish to ask questions later you may do so using the following contact details.

Nick Williams [redacted] Landline: [redacted] Mobile: [redacted] Work email: [redacted] University email: [redacted]
Dr Paul Hampton School of Architecture and Built Environment, Faculty of Science and Engineering, University of Wolverhampton, Wulfruna Street Wolverhampton WV1 1SB T: (+44) [redacted] E: [redacted]
Dr Nii Ankrah School of Architecture and Built Environment, Faculty of Science and Engineering, University of Wolverhampton, Wulfruna Street Wolverhampton WV1 1SB T: (+44) [redacted] E: [redacted]
Dr Ezekiel Chinyio School of Architecture and Built Environment, Faculty of Science and Engineering, University of Wolverhampton, Wulfruna Street Wolverhampton WV1 1SB T. (+44) [redacted] E: [redacted]

Appendix E. Interview guide

(CPS supplier interview guide)

Guiding Question List.

For your information, I enclose below the list of guiding questions I intend to use. However, this is only a guide as I would to explore interesting areas that arise during our conversation.
No actions or preparation are required on your part before the interview. This document is provided just to let you know the sort of questions I will be asking.

About you.

1. What is your working background?
2. How long have you been delivering construction professional services?
3. What type of construction professional services do you offer?
4. How do your clients procure your services? *(contract? Framework? Ad-hoc use etc?)*
5. Do you deal with people who have influence over selecting and retaining your services?

Questions about your work with construction professional service providers

6. Could you tell me about the types of relationship you have with your clients?
7. Have you experience of working with a client and becoming a regular supplier? What type of services?
8. Can you tell me about an instance where you become a regularly used service provider(s)?
9. What do you think led to you becoming a regularly used service provider?
10. Have you ever been a main point of contact? (The first person they would call?)
11. Can you tell me a bit about the relationship you have with the client?
12. If you were to leave, how do you think the client would feel?
13. What do you think made the client want to keep using your services?
14. Have you ever experienced a time where you felt a client was using your services, but you were not their first choice? Why do you think they still used you?
15. Do you think your clients are confident in knowing if they are getting a good service?
16. What do you think your clients look for to determine whether they are getting a good service?
17. Have you ever had a client switch from you to a competitor? What do you think it was that made them switch?
18. Have you ever had a client recommend you to another potential client? Why do you think they recommended you?
19. What is it that you think makes clients want to repurchase your services?
20. Have any of your clients increased the amount of business they did with you? Why do you think they did this?
21. Think about the different construction professional disciplines we discussed at the beginning. They deliver different services but are there differences in what clients expect from them?
22. Finally, is there anything else that we have talked about you would like to expand upon?

(client interview guide)

Guiding Question List

For your information, I enclose below the list of guiding questions I intend to use. However, this is only a guide as I would to explore interesting areas that arise during our conversation.
No actions or preparation are required on your part before the interview. This document is provided just to let you know the sort of questions I will be asking.

About you.

1. What is your own working background?
2. How long have you been using the services of construction professionals?
3. What construction professional services providers do you deal with as part of your job?
4. How are their services procured? *(contract? Framework? Ad-hoc use etc.?)*
5. What degree of influence do you have over their selection and retention?

Questions about your work with construction professional service providers

6. Could you tell me a bit about working relationships you have with your construction professional service providers?
7. Have you now or previously had a construction professional service provider who you regularly used? What type of services?
8. Can you tell me how they became a regularly used service provider(s)?
9. What was it that led to them being a regularly used service provider?
10. Did you have a key person in the service provider firm you dealt with?
11. Can you tell me about the working relationship you had with that person?
12. If they left how would that make you feel? What would you do?
13. Think of the service provider for the firm you used to deal with. Was there anything about them that made you want to use their services?
14. Have you ever experienced a time where you used a service provider who was not your first choice? Why was this?
15. Do you feel confident about knowing whether you are getting a good service?
16. What are the important things you look for to ensure that you are getting a good service?
17. Have you ever switched service providers? What was it that led to you going elsewhere?
18. Have you ever recommended a service provider to someone else? Was there anything in particular about them that made them worthy of recommendation?
19. What is it that makes you repurchase CPS services from the same firm?
20. Have you ever increased the amount of work you have given to a supplier? What was it that makes you increase the amount of business you gave?
21. Think about the different construction professional disciplines we discussed at the beginning. They deliver different services but are there differences in what you expect from them?
22. Finally, is there anything else that we have talked about you would like to expand upon?

Appendix F. survey questionnaire

School of Architecture and Built Environment
University of Wolverhampton

RE: An investigation into construction professional services.

Dear Sir/Madam,

I would like to invite your participation in our research study. **Completing this questionnaire should take no more than 15 minutes of your time. You are not required to provide any personal information.** I would be most grateful if you could fill in the attached form and return it using the stamped addressed envelope (SAE) provided.

We are seeking participation from people who have had work delivered for them by a construction professional in the past year. Construction professionals include building services engineers, project managers, quantity surveyors, building surveyors, civil and structural engineers, architects, planners, consultants and other specialists.

I would be very grateful if you (or one of your colleagues with the above experience) can complete and return this questionnaire. The questionnaire is in three (3) parts. Part A confirms your agreement to participate. Part B requests information about your own experience. Part C involves a series of questions about the supplier who carried out your most recently completed project or service commissioned. Please answer the questions candidly and to the best of your recollection.

Your contribution will be most valuable. You are assured that the information obtained from this survey will be kept strictly CONFIDENTIAL and used for research purposes only. Your name and any other information about you (if provided) will NOT appear in the research. Upon request, you will receive a copy of a report detailing the results of this research when the process is completed. The risks to you in participating are deemed to be low. Your consent can be withdrawn at any time. Contact details are provided below if you need clarification regarding any matters that are unclear to you. We do appreciate your valuable time taken to complete this questionnaire. However, without your contribution the aims of the project could not be achieved. We therefore hope that you will be able to complete and return this questionnaire.

Thanking you in anticipation.
Yours Sincerely,

Nick Williams (Researcher)
School of Architecture and Built Environment
University of Wolverhampton.
Wulfruna Street
WV1 1SB
Tel: [Telephone number redacted]
Email: [E-mail address redacted]

Part A. Consent

I confirm that I agree for the information provided in this questionnaire to be used in the described research project *(please tick the box if you accept)*	☐

Your details (Optional)

Name:
Position:
Name of company:
Company address:
Contact number:
Email address:

Part B. About you

1. Please indicate by ticking/circling the box for the sector you currently work in	
Agriculture, Forestry and Fishing	☐
Production & Manufacturing	☐
Construction	☐
Wholesale	☐
Retail	☐
Transportation and storage	☐
Accommodation and food services	☐
Information and communication	☐
Financial and insurance	☐
Real estate, housing and property	☐
Professional, scientific and technical	☐
Business administration and support services	☐
Public administration & defence	☐
Education	☐
Health	☐
Arts, entertainment and recreation	☐
Other (Please specify)	

2. Please select the approximate number of people who work for your employer.	Micro (0-9 employees)	☐
	Small (10-49 employees)	☐
	Medium (50-249 employees)	☐
	Large (250+ employees)	☐

3. Your total number of years of experience in dealing with construction professionals	0-1 year	☐
	1-5 years	☐
	6-10 years	☐
	11-20 years	☐
	20 + years	☐

4. How frequently do you use the services of construction professionals as part of your job?	Always	☐
	Very often	☐
	Occasionally	☐
	Rarely	☐
	Never	☐

Part C. The construction professional services supplier

From your experience of the construction professional service supplier who carried out *your most recently completed project or service commissioned*, please complete the following questions. *Note that your responses are interesting irrespective of whether your opinions of the supplier are good, bad or indifferent.*

1. Which of the following services did they carry out for you? (Please tick one or more boxes)

Architectural	☐
Quantity surveying	☐
Building service engineering	☐
Building surveying	☐
Civil or structural engineering	☐
Planning	☐
Project management	☐
Other surveying or consultancy (please specify……)	☐

2. Have you used this supplier on previous jobs? YES ☐ NO☐

3. For how long has this supplier been delivering services to you?

Less than 1 year	☐
Between 1 and 5 years	☐
Between 5 and 10 years.	☐
More than 10 years	☐

Please indicate the extent to which you agree or disagree with following questions about this supplier by ticking or circling one of the options below for each. Some of the questions may appear to be repetitive but please answer them to the best of your knowledge.

	Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
a We like being associated with this supplier.	☐	☐	☐	☐	☐	☐	☐
b We genuinely enjoy our relationship with this supplier.	☐	☐	☐	☐	☐	☐	☐
c We have positive feelings towards this supplier.	☐	☐	☐	☐	☐	☐	☐

d We take pleasure in being a client of this supplier.	☐	☐	☐	☐	☐	☐	☐
e We enjoy the rapport we have with this supplier.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	**Disagree**	**Slightly disagree**	**Undecided**	**Slightly agree**	**Agree**	**Strongly agree**
a We have no alternatives to the relationship with this supplier.	☐	☐	☐	☐	☐	☐	☐
b It would take a lot of time and effort to change suppliers.	☐	☐	☐	☐	☐	☐	☐
c It would be very difficult for us to find a suitable replacement for this supplier.	☐	☐	☐	☐	☐	☐	☐
d We are totally dependent on this supplier.	☐	☐	☐	☐	☐	☐	☐
e The risks of switching to another supplier would be too great.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	**Disagree**	**Slightly disagree**	**Undecided**	**Slightly agree**	**Agree**	**Strongly agree**
a The benefits received from the supplier-relationship are greater than the costs that have been incurred.	☐	☐	☐	☐	☐	☐	☐
b We are receiving a fair value from our investments in the relationship with this supplier.	☐	☐	☐	☐	☐	☐	☐
c We are receiving fair value from this supplier.	☐	☐	☐	☐	☐	☐	☐
d This supplier charges a reasonable price considering the quality of service we receive.	☐	☐	☐	☐	☐	☐	☐
e We get value-for-money in return for what we give to the supplier.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	**Disagree**	**Slightly disagree**	**Undecided**	**Slightly agree**	**Agree**	**Strongly agree**
a We can trust that this supplier will deliver the service with expertise.	☐	☐	☐	☐	☐	☐	☐

b We would be willing to trust this supplier to get the job done right without monitoring.	☐	☐	☐	☐	☐	☐	☐
c We trust that this supplier keeps our best interests in mind.	☐	☐	☐	☐	☐	☐	☐
d This supplier is honest with us.	☐	☐	☐	☐	☐	☐	☐
e We have confidence in this supplier.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	**Disagree**	**Slightly disagree**	**Undecided**	**Slightly agree**	**Agree**	**Strongly agree**
a This supplier responds promptly to our requests.	☐	☐	☐	☐	☐	☐	☐
b This supplier is willing to be flexible during delivery of services.	☐	☐	☐	☐	☐	☐	☐
c The turnaround time for services performed typically meets our expectations.	☐	☐	☐	☐	☐	☐	☐
d This supplier's service personnel work quickly and efficiently.	☐	☐	☐	☐	☐	☐	☐
e This supplier adheres to project timescales.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	**Disagree**	**Slightly disagree**	**Undecided**	**Slightly agree**	**Agree**	**Strongly agree**
a This supplier has performed well in delivering their service.	☐	☐	☐	☐	☐	☐	☐
b This supplier helps us to achieve our goals.	☐	☐	☐	☐	☐	☐	☐
c This supplier has recommended the best options to our knowledge.	☐	☐	☐	☐	☐	☐	☐
d This supplier delivers services meticulously.	☐	☐	☐	☐	☐	☐	☐
e This supplier anticipates and resolves problems.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
a This supplier keeps us well informed about what is going on with the project.	☐	☐	☐	☐	☐	☐	☐
b This supplier explains technical concepts and recommendations in a meaningful and understandable way.	☐	☐	☐	☐	☐	☐	☐
c This supplier does not hesitate to give us as much information as we like to have.	☐	☐	☐	☐	☐	☐	☐
d This supplier does not hesitate to explain the pros and cons of their recommendations.	☐	☐	☐	☐	☐	☐	☐
e This supplier is easy to contact.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
a We would do more business with this supplier in the next few years.	☐	☐	☐	☐	☐	☐	☐
b We would like the relationship with this supplier to last a long time.	☐	☐	☐	☐	☐	☐	☐
c We would like to continue the purchasing relationship with this supplier.	☐	☐	☐	☐	☐	☐	☐
d This supplier is our first choice for this type of service.	☐	☐	☐	☐	☐	☐	☐
e In the foreseeable future we will consider this supplier as part of our supply chain.	☐	☐	☐	☐	☐	☐	☐
f We wish to discontinue using the services of this supplier.	☐	☐	☐	☐	☐	☐	☐

	Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
a I would say positive things about this supplier to my colleagues.	☐	☐	☐	☐	☐	☐	☐
b I would recommend this supplier to colleagues who seek my advice.	☐	☐	☐	☐	☐	☐	☐
c I would encourage others to do business with this supplier.	☐	☐	☐	☐	☐	☐	☐

d I would refer others to this supplier.	☐	☐	☐	☐	☐	☐	☐
e This supplier is not worthy of recommendation.	☐	☐	☐	☐	☐	☐	☐

Your comments (optional)	
What else could construction professionals do to get repeat business and recommendations from their clients? If you can offer any advice, please enter it into the box provided.	

THIS IS THE END OF THE QUESTIONNAIRE – THANK YOU FOR YOUR TIME

Thank you very much for your feedback. Please either return the questionnaire in the stamped addressed envelope (SAE) provided or (if you prefer) scan and email to [e-mail address redacted]

Appendix G. Additional statistical outputs

Appendix G.1. Correlation matrix of final set of predictors and loyalty

		Affective commitment	Locked-in commitment	Value-based commitment	Service quality	Loyalty
Affective commitment	Pearson Correlation	1	<0.001	0.636**	0.816**	0.867**
	P (2-tailed)		0.996	. <0.001	. <0.001	<0.001
	N	136	136	136	136	136
Locked-in commitment	Pearson Correlation	<0.001	1	-0.120	-0.076	0.026
	P (2-tailed)	0.996		0.165	0.381	0.767
	N	136	136	136	136	136
Value-based commitment	Pearson Correlation	0.636**	-0.120	1	0.726**	0.661**
	P (2-tailed)	<0.001	0.165		<0.001	<0.001
	N	136	136	136	136	136
Service quality	Pearson Correlation	0.816**	-0.076	0.726**	1	0.900**
	P (2-tailed)	. <0.001	0.381	. <0.001		<0.001
	N	136	136	136	136	136
Loyalty	Pearson Correlation	0.867**	0.026	0.661**	0.900**	1
	P (2-tailed)	<0.001	0.767	. <0.001	<0.001	
	N	136	136	136	136	136

**Correlation is significant at P <0.01 (2-tailed).

Appendix G.2. Correlation matrix of final set of predictors (also including trust) with loyalty

		Affective commitment	Locked-in commitment	Value-based commitment	Service quality	Trust	Loyalty
Affective commitment	Pearson Correlation	1	<0.001	0.636**	0.816**	0.788**	0.867**
	P (2-tailed)		0.996	<0.001	<0.001	<0.001	. <0.001
	N	136	136	136	136	136	136
Locked-in commitment	Pearson Correlation	<0.001	1	-0.120	-0.076	-0.039	0.026
	P (2-tailed)	0.996		0.165	0.381	0.656	0.767
	N	136	136	136	136	136	136
Value-based commitment	Pearson Correlation	0.636**	-0.120	1	0.726**	0.673**	0.661**
	P (2-tailed)	<0.001	0.165		<0.001	<0.001	<0.001
	N	136	136	136	136	136	136
Service quality	Pearson Correlation	0.816**	-0.076	0.726**	1	0.874**	0.900**
	P (2-tailed)	<0.001	0.381	<0.001		<0.001	<0.001
	N	136	136	136	136	136	136
Trust	Pearson Correlation	0.788**	-0.039	0.673**	0.874**	1	0.848**
	P (2-tailed)	<0.001	0.656	<0.001	<0.001		<0.001
	N	136	136	136	136	136	136
Loyalty	Pearson Correlation	0.867**	0.026	0.661**	0.900**	0.848**	1
	P (2-tailed)	<0.001	0.767	<0.001	<0.001	<0.001	
	N	136	136	136	136	136	136

**. Correlation is significant at P <0.01 (2-tailed).

Appendix G.3. Results of backwards stepwise regression analysis for final set of predictors on loyalty

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Service_quality, Locked-in_commitment, Value-based_commitment, Affective_commitment[b]	.	Enter
2	.	Value-based commitment	Backward (criterion: Probability of F-to-remove >= 0.100).

a. Dependent Variable: Loyalty

b. All requested variables entered.

Appendix G.4. Coefficients of backwards stepwise regression analysis of final set of predictors on loyalty

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	P	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-2.859	1.847		-1.548	0.124					
	Affective commitment	0.633	0.091	0.386	6.921	<0.001	0.867	0.517	0.220	0.326	3.067
	Locked-in commitment	0.111	0.051	0.069	2.149	0.033	0.026	0.185	0.068	0.971	1.030
	Value-based commitment	-0.018	0.085	-0.010	-0.218	0.828	0.661	-0.019	-0.007	0.461	2.167
	Service quality	0.407	0.042	0.597	9.586	<0.001	0.900	0.642	0.305	0.261	3.826
2	(Constant)	-2.980	1.754		-1.699	0.092					
	Affective commitment	0.631	0.090	0.385	6.971	<0.001	0.867	0.519	0.221	0.331	3.021
	Locked-in commitment	0.112	0.051	0.070	2.193	0.030	0.026	0.187	0.070	0.983	1.018
	Service quality	0.403	0.038	0.591	10.684	<0.001	0.900	0.681	0.339	0.329	3.039

a. Dependent Variable: Loyalty.

Appendix G.5. Exploratory regression with final set of predictors also including trust

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.934[a]	0.872	0.867	3.121

a. Predictors: (Constant), Trust, Service_quality, Locked-in_commitment, Value-based_commitment, Affective_commitment.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	P	Tolerance	VIF
1	(Constant)	-2.884	1.822		-1.582	0.116		
	Affective_commitment	0.583	0.093	0.356	6.254	<0.001	0.305	3.274
	Locked_in_commitment	0.106	0.051	0.067	2.092	0.038	0.970	1.031
	Value_based_commitment	-0.035	0.084	-0.019	-0.416	0.678	0.458	2.186
	Service_quality	0.343	0.052	0.504	6.652	<0.001	0.172	5.801
	Trust	0.233	0.110	0.143	2.120	0.036	0.218	4.594

a. Dependent Variable: Loyalty.

Appendix G.6. Exploratory regression with final set of predictors regressed onto PWOM loyalty only

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.920[a]	0.847	0.843	1.791

a. Predictors: (Constant), Service_quality, Locked-in_commitment, Value-based_commitment, Affective_commitment.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	P	Tolerance	VIF
1	(Constant)	-2.632	1.046		-2.517	0.013		
	Affective_commitment	0.253	0.052	0.292	4.889	<0.001	0.326	3.067
	Locked_in_commitment	0.033	0.029	0.039	1.120	0.265	0.971	1.030
	Value_based_commitment	0.051	0.048	0.053	1.058	0.292	0.461	2.167
	Service_quality	0.226	0.024	0.628	9.398	<0.001	0.261	3.826

a. Dependent Variable: PWOM.

Appendix G.7. Exploratory regression with final set of predictors regressed onto repatronage loyalty only

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.905[a]	0.818	0.813	2.350

a. Predictors: (Constant), Service_quality, Locked-in_commitment, Value-based_commitment, Affective_commitment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	P	Tolerance	VIF
1	(Constant)	-1.353	1.372		-0.986	0.326		
	Affective_commitment	0.428	0.068	0.411	6.300	<0.001	0.326	3.067
	Locked_in_commitment	0.085	0.038	0.084	2.211	0.029	0.971	1.030
	Value_based_commitment	-0.033	0.063	-0.029	-.521	0.603	0.461	2.167
	Service_quality	0.242	0.032	0.559	7.673	<0.001	0.261	3.826

a. Dependent Variable: Repatronage.

Appendix H. Validation report

Investigation into construction professional services (CPS) client loyalty –summary of results and request for feedback

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Summary of the findings.

This report summarises the findings of research investigating client loyalty to construction professional services (CPS) suppliers. The purpose is to summarise what was found in order to obtain your feedback on the findings.

The Construction Industry Council lists the CPS professions as including "*architects, quantity surveyors, surveyors (other), building services engineers, civil and structural engineers, planners (town planners), project managers and multidisciplinary practices*."

Loyalty in this research has two sides. These are behavioural loyalty (intention to retain a CPS supplier and award them future commissions) and positive word of mouth (willingness to recommend a CPS supplier to others and offer referrals).

The main question which this research seeks to address is *what service-related factors lead to CPS-client loyalty?*

Following a literature review, interviews were carried out with a selection of clients and CPS practitioners. From these interviews, findings were generated, and a conceptual model of CPS-client loyalty was developed. In order to test the model within the wider population, a survey was carried out, obtaining responses from 136 clients working in the Midlands, UK. The data were subject to statistical analysis and the results below were obtained.

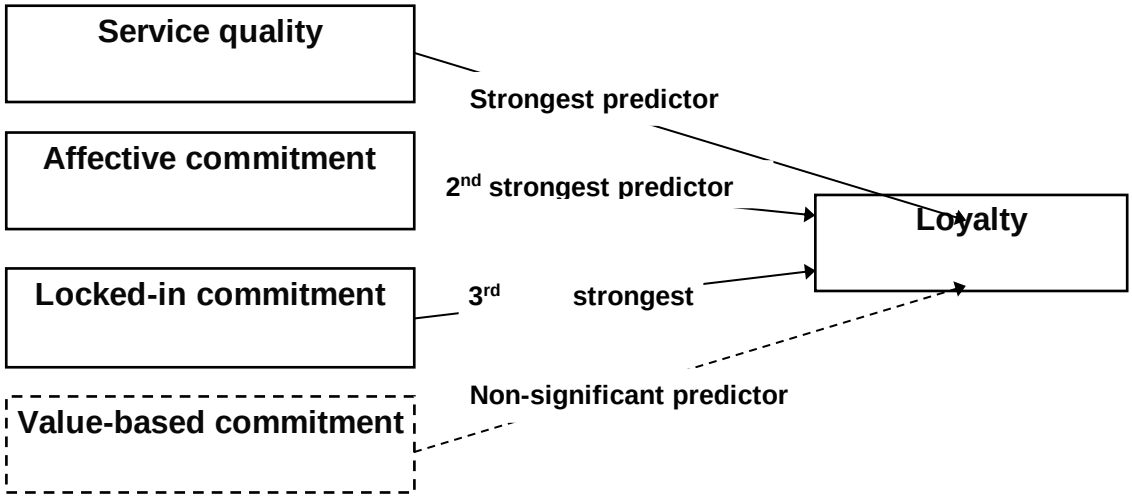
The significant predictors of client are:

- *Service quality* (the core quality of the service and advice, the way in which the service is delivered and the manner in which the suppliers communicate);
- *Affective commitment* (rapport with and likeability of the CPS supplier);
- *Locked-in commitment* (costs and risks associated with terminating the CPS supplier relationship).

The non-significant predictor of client loyalty is:

- Value-based commitment (value for money and 'what you get for what you give');

Figure 1. Summary of the statistical analysis



Trust was positively correlated with loyalty but was so complex and intertwined with the other predictors that it was necessary to exclude it from the final statistical analysis.

Results of the initial interviews provided no evidence that clients would be loyal due to guilt or moral obligation. Therefore, normative commitment was excluded from the statistical analysis.

In summary, the survey findings suggest that *service quality* has the strongest impact on whether clients continue to use and recommend CPS suppliers. Likeability and rapport were also found to be important. Lastly, the results suggest that clients may continue to use CPS suppliers due to feeling locked-in to doing so, due to time and cost of switching or difficulties associated with replacing them. Value for money (what you get for what you give) was not shown to a significant influence on client loyalty to CPS suppliers.

THIS CONCLUDES THE SUMMARY OF FINDINGS – PLEASE COMPLETE THE NEXT SECTION.

PART 2. PLEASE PROVIDE FEEDBACK TO HELP DETERMINE THE VALIDITY OF THE RESULTS.

1. *Service quality* delivered by CPS suppliers is the strongest predictor of client loyalty out of all the antecedents.

a). Do you agree with this finding?

YES☐ NO ☐

b). *(Optional)* Please explain why you agree/disagree in the space below.

Click or tap here to enter text.

c). *(Optional)* Without naming people or organisations, can you think of any examples of this? *(please write in the space below)*

Click or tap here to enter text.

2. A*ffective commitment* (rapport and likeability) towards CPS suppliers is a strong predictor of client loyalty.

a). Do you agree with this finding?

YES☐ NO ☐

b). *(Optional)* Please explain why you agree/disagree in the space below.

Click or tap here to enter text.

c). *(Optional)* Without naming people or organisations, can you think of any examples of this? *(please write in the space below)*

Click or tap here to enter text.

3. *Locked-in commitment* (continuing to use due to lack of choice and/or the cost and risks of switching) is a predictor of client loyalty to CPS suppliers.

a). Do you agree with this finding?

YES ☐ NO ☐

b). *(Optional)* Please explain why you agree/disagree in the space below.

Click or tap here to enter text.

c). *(Optional)* Without naming people or organisations, can you think of any examples of this? *(please write in the space below)*

Click or tap here to enter text.

4. *Value-based commitment* (value for money, what you get for what you give) is NOT a statistically significant predictor of client loyalty.

a). Do you agree with this finding?

YES☐ NO ☐

b). *(Optional)* Please explain why you agree/disagree in the space below.

Click or tap here to enter text.

c). *(Optional)* Without naming people or organisations, can you think of any examples of this? *(please write in the space below)*

Click or tap here to enter text.

5. Do you think clients would also recommend CPS suppliers who they intend to award future commissions to?

YES☐ NO ☐

(Optional) Please explain why you agree/disagree in the space below.

Click or tap here to enter text.

6. Trust was found to be complex and highly intertwined with the other predictors of loyalty. Therefore, we would like your help in explaining the results.

(a) In the context of CPS suppliers what does 'trust' means to you?
Please explain in the space below.

Click or tap here to enter text.

(b) Optional) Without naming people or organisations, can you think of any examples of a client who you felt trusted you? If so, please explain the reasons why.
(please write in the space below)

Click or tap here to enter text.

7. Do you have any other opinions of the findings of this research? (if so please add your feedback in the response box provided below.

Click or tap here to enter text.

Consent for use

I confirm that I agree for the information provided in this feedback report to be used in the described research project *(please tick the box if you accept)*	☐

Your details (Optional)

Name: Click or tap here to enter text.
Position: Click or tap here to enter text.
Name of company: Click or tap here to enter text.
Company address: Click or tap here to enter text.
Contact number: Click or tap here to enter text.
Email address: Click or tap here to enter text.

Thank you very much for your feedback. Please save this file and either email back to [e-mail address redacted] or print and post to Nick Williams, [address redacted]

Appendix I. Key publication associated with the thesis.

Williams, N., Hampton, P., Ankrah, N. and Chinyio, E., (2021). Antecedents of Client Loyalty in the Construction Professional Services Sector: A Qualitative Study. In *Collaboration and Integration in Construction, Engineering, Management and Technology*. Proceedings of the 11th International Conference on Construction in the 21st Century, London 2019. (pp. 27-32). Springer, Cham.